School of Pharmacy
University of Md

THE DRUG AND COSMETIC INDUSTRY

VOL. XXXVI, No. 3 Established 1914 MARCH, 1935

THOMAS R. FARRELL, Editor
ELMER F. SHEETS, Managing Editor
FRAZER V. SINCLAIR, Business Manager
FRANCIS CHILSON, Technical Editor
HARRY G. KELBLY, Circulation Manager

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Front Cover

Transportation of gum tragacanth from the Persian mountains furnishes the scene for our front cover this month. Only small donkeys or camels can be used to bring this gum from the places in which it is obtained. Photo courtesy of Jacques Wolf & Co.

Photo of the gathering of violets on the February cover was used through courtesy of Bruno Court and Naugatuck Chemical.

Photo of stripping of cinchona bark on our January cover was used through courtesy of R. W. Greeff & Co.

THE DRUG AND COSMETIC INDUSTRY is published monthly by Drug Markets, Inc., Frazer V. Sinclair, *President and Treasurer;* Thomas R. Farrell, *Vice-president and Secretary.* Publication Address, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 West 31st St., New York, N. Y.

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Printed by Sun Printing Co., Pittsfield, Mass.

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A shipment of blocks of pure bleached beeswax for a cosmetic manufacturer whose large production makes this large unit size more convenient than discs.

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The firms listed below are reliable sources of supply which we are glad to recommend to our readers.

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Alcefa Laboratories
Th. Goldschmidt Corp.
R. W. Greeff & Co., Inc.
Chas. L. Huisking & Co.
Innis, Speiden & Co., Inc.
M. W. Parsons, Imports

Alcohol
American Commercial Alcohol Corp.
Commercial Solvents Corp.
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Alkaloids
Abbott Laboratories
J. T. Baker Chemical Co.
R. W. Greeff & Co., Inc.
Chas. L. Huisking & Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.
N. Y. Quinine & Chemical Works
Norwich Pharmacal Co.

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Budd Aromatic Chemical Co., Inc.
W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Co., Inc.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co., Inc.
Compagnie Duval
Evergreen Chemical Co., Inc.
Felton Chemical Co., Inc.
Benj. French, Inc.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
George Lueders & Co.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Naugatuck Chemical
Orbis Products Corp.
Compagnie Parento, Inc.
Schimmel & Co., Inc.
Edwin Seebach Co.
Geo. Silver Import Co.
A. M. Todd Co.
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Van Dyk & Co.
Albert Verley, Inc.

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W. H. Bowdlear Co.
Harrison Refining Co., Inc.
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Theodor Leonhard Wax Co., Inc.
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Chas. L. Huisking & Co.
Peek & Velsor, Inc.
S. B. Penick & Co.

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John & E. Sturge, Ltd.

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California Fruit Growers Exchange
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McKesson & Robbins, Inc.
Merck & Co., Inc.
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P. R. Dreyer, Inc.
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H. Kohnstamm & Co., Inc.
Leeben Chemical Co., Inc.
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Gums
Paul A. Dunkel & Co., Inc.
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Thurston & Braidich
Jacques Wolf & Co.

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Innis, Speiden & Co.
N. I. Malmstrom & Co.
Merck & Co.

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J. T. Baker Chemical Co.
Benzol Products Co.
Calco Chemical Co.
California Fruit Growers Exchange
Dow Chemical Co.
Heyden Chemical Corp.
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Norwich Pharmacal Co.
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Stearates
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Merck & Co.
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M. W. Parsons, Imports
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Chas. Mathieu, Inc.
Orbis Products Corp.
R. F. Revson Co.

Zinc Oxide
Innis, Speiden & Co.
New Jersey Zinc Co.
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Applicators and Droppers
Glass Products Co.
A. C. James & Co.

Bottles & Jars
Carr-Lowrey Glass Co.
Glass Products Co.
Hagerty Bros. & Co.
A. C. James & Co.
Maryland Glass Corp.
Owens-Illinois Glass Co.
Salem Glass Works
Swindell Brothers, Inc.

Boxes & Cartons
Karl Voss Corp.
Young Bros., Inc.
Douglas Young, Inc.

Closures
Aluminum Seal Co.
Anchor Cap & Closure Corp.
Armstrong Cork Products Co.
Bridgeport Metal Goods Mfg. Co.
Dodge Cork Co.
General Plastics, Inc.
Phoenix Metal Cap Co.
Sylvania Industrial Corp.

Collapsible Tubes
National Collapsible Tube Co.
Standard Specialty & Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.

Corks
Armstrong Cork Products Co.
Dodge Cork Co.

Cosmetic Cases
Bridgeport Metal Goods Mfg. Co.
Scovill Mfg. Co.

Transparent Paper
Riegel Paper Corp.
Sylvania Industrial Corp.

Labels
Cameo Die Cutting & Engraving Co.
John Horn
The Tablet & Ticket Co.

Machinery (Packaging)
John W. Ayers & Son (Pill & Tablet)
Arthur Colton Co. (Tube & Tablet)
Economic Machinery Co. (Labeling)
Pneumatic Scale Corp., Ltd. (Capping & Labeling)
Geo. G. Rodgers Co. (Tube)
F. J. Stokes Machine Co. (Tube & Tablet)
Stokes & Smith Co. (Powder)
U. S. Bottlers Machinery Co. (Bottle)

Machinery (Production)
Abbe Engineering Corp.
Alsop Engineering Corp.
Ertel Engineering Corp.
Highest Grade Machinists, Inc.
Manton-Gaulin Mfg. Co.
New England Tank & Tower Co.
Pfaudler Company
George G. Rodgers Co.
Chas. Ross & Son Co.
F. J. Stokes Machine Co.
U. S. Stoneware Co.

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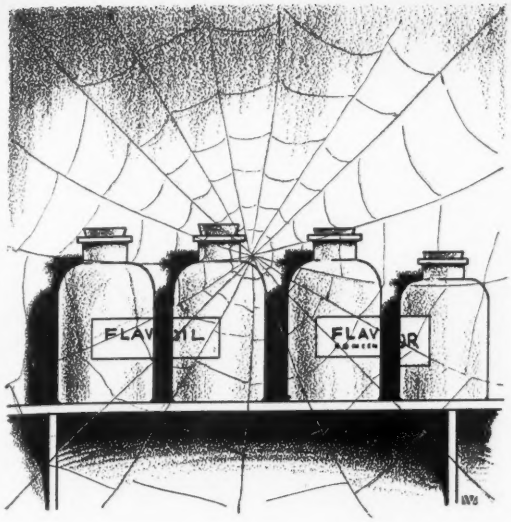
Stein-Brill Corp.

Packing Material
Kimberly-Clark Corp.

Plastic Materials
General Plastics, Inc.

Tanks, Kettles
Alsop Engineering Corp
Ertel Engineering Corp.
Pfaudler Company

Vials
Kimble Glass Co.



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Formulas and manufacturing methods of yesteryear, so satisfactory then, are ill suited to the needs of today.

Science, studying and improving upon past performances, can point out a modern day procedure in selecting materials which could easily reflect to the advantage of your products in competition and in increased sales.

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BALSAMS	CERTIFIED COLORS	CHAULMOOGRA OIL
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Don't miss the Tenth Annual Drug Trade Dinner at the Waldorf-Astoria Thursday Evening, March 21, 1935. We expect to see you.

Send your reservations now to

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Drug, Chemical and Allied Trades Section, New York Board of Trade, Inc.

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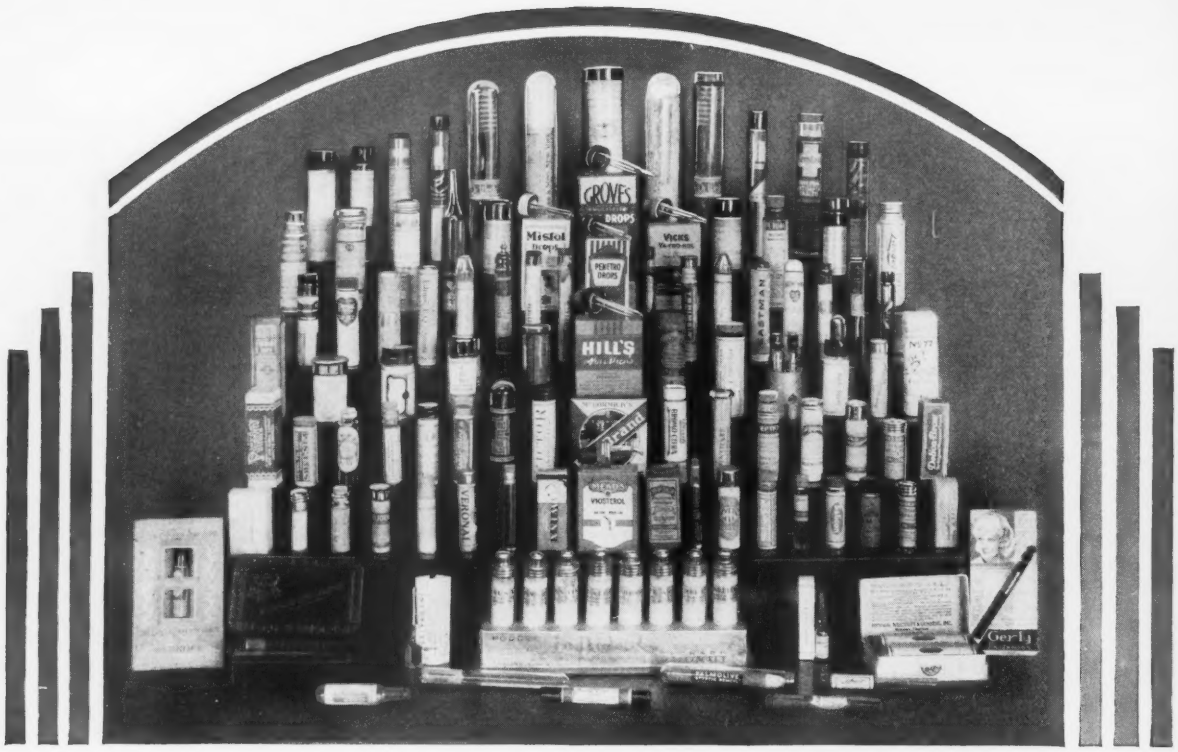
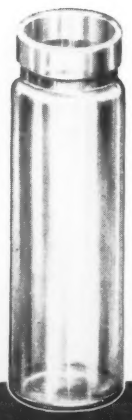


Visible Sales Appeal In Sparkling Glass Vials

"ONE picture is worth ten thousand words," says the ancient Chinese proverb—just another way of saying that "eye appeal" is the most forceful urge to realization and action.

Kimble Glass Vials possess that "visible sales appeal" so necessary in these modern highly competitive markets. These lustrous, sparkling glass containers display their contents always to best advantage. They inspire confidence in the products they carry. They call instant attention to their sanitary, air-tight and moisture-proof qualities.

Light in weight and high in shock-resistance, Kimble Vials minimize shipping expense and breakage loss. They are conveniently carried in hand-bag or vest pocket. Their great variety of caps or closures in a wide range of colors adapts them to the daintiest of cosmetics, perfumes and toiletries—to powders, liquids, capsules, tablets, salts and a host of other products—making Kimble Vials the most versatile and popular of all modern small glass containers.

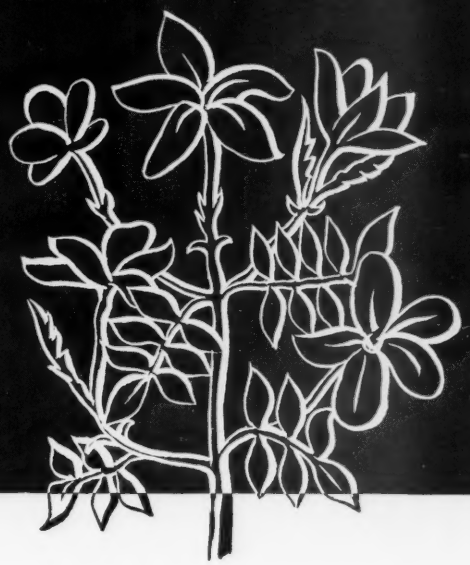


There are Kimble Vials for Droppers ... Applicators ... Shaker Tops ... Goldy Seals ... Re-Seal-It Caps ... Slip Caps ... Screw Caps of Metal or Bakelite ... and specially designed vials for special purposes.

KIMBLE GLASS CO.
VINELAND, N. J.
NEW YORK • PHILADELPHIA • BOSTON
CHICAGO • DETROIT

JASMONIS IS STABLE

IN PRICE AND COLOR



JASMONIS is the answer to the problem of fluctuating prices in natural oil of jasmin. It has all the desirable qualities of jasmin—with none of its inconveniences. In odor, JASMONIS is the exact counterpart of the natural oil—yet it is unaffected by light. There is no danger of discoloration in your creams and powders. The price is low—and stable . . . does not fluctuate with crop conditions. Moreover, JASMONIS can be used alone, or, when blended with jasmin, brings out the full fragrance of the natural odor. Write to us for full information and a sample.

We're going to the Tenth Annual Drug, Chemical and Allied Trades Get-Together to be held on Thursday, March 21st, at the Hotel Waldorf-Astoria. Are you?

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PURIFIES *both* CHEMICALLY AND MECHANICALLY

CRYSTALLIZATION has a purifying action. It removes both chemical and mechanical impurities. This purification is carried still further by recrystallization. In this manner the purity of Dow Epsom Salt is increased to a point *exceeding* U. S. P. specifications.

Recrystallization also improves the physical appearance of the product as is evidenced by the sparkling, uniform, needle-shaped crystals that characterize Dow Epsom Salt U. S. P. Recrystallized. It is an ideal product for repackaging for resale through retail drug channels.

Magnesium Sulphate Desiccated

This product is a desiccated form of Dow Epsom Salt U. S. P., containing 29% H_2O. It is used as a medicinal in products such as compound tablets and effervescent salts which require a dried and concentrated material. • Other Dow pharmaceutical chemicals are manufactured to the same high standards of purity and uniformity. Let us quote on your requirements.

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Acetphenetidin, U. S. P.
Antipyrine, U. S. P.
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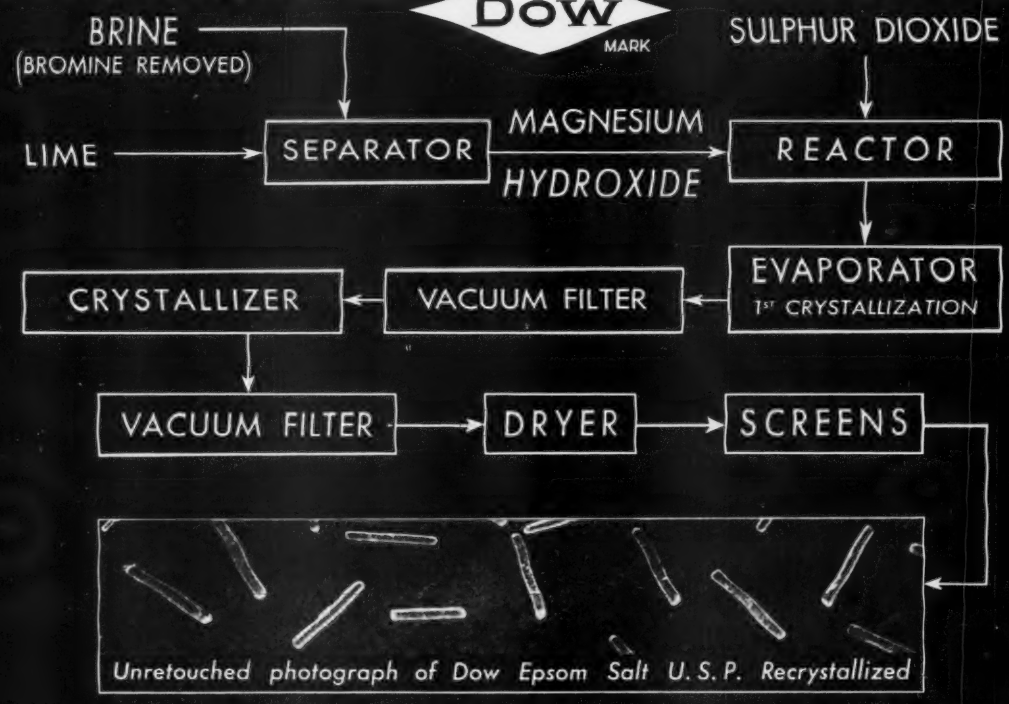
Chloroform, U. S. P.
Epsom Salt, U. S. P., Recrystallized
Ferric Chloride, U. S. P. (Solution or Crystals)
Glycine
Magnesium Sulphate, Desiccated
Phenol, U. S. P.
Acetyl Salicylic Acid, Granulation, 10% starch (White, Pink, Green) also 16% and 20% Starch (White)
Acetyl Salicylic Acid, U. S. P. (Powder or Crystals)
Methyl Salicylate, U. S. P.
Salicylic Acid, U. S. P.
Sodium Salicylate, U. S. P.
Minor Salicylates
Sodium Benzoate, U. S. P.
Strontium Bromide, U. S. P. IX
Tetrachlorethylene, Purified
Trichloracetic Acid, U. S. P.

DOW
EPSOM SALT
U.S.P. RECRYSTALLIZED

TRADE DOW MARK



Unretouched photograph of Dow Epsom Salt U. S. P. Recrystallized

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Write for liberal sample—or send us a sample of your unscented product

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Monsanto
ST. LOUIS, U.S.A.

. . . this entire background has been made with

MONSANTO ACETPHENETIDIN

U. S. P.

Pure - White - Uniform

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Acetanilid, U. S. P.
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Monsanto Chemical Company
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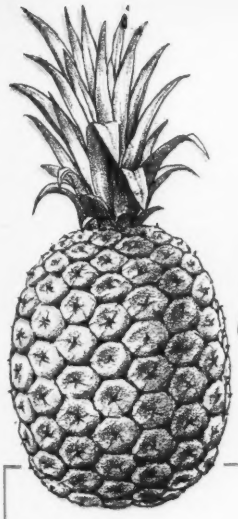

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Hawaiian Pineapple Co. Ltd.

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The one standard raw material which dentifrice manufacturers have always used with perfect confidence and with no trouble is Sturge's Standard Precipitated Chalk. ¶ Uniform in any specific grade or weight, according to your own formula, you will find Sturge's Standard the perfect precipitated chalk for your dentifrice.

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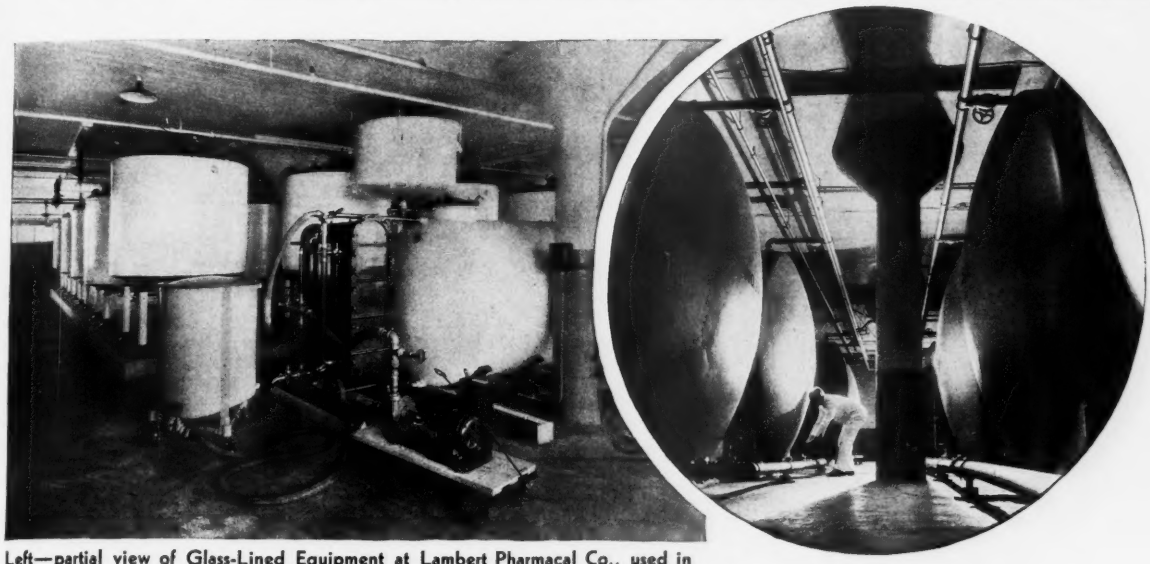
PRECIPITATED CHALK

NUMBER SEVEN OF A SERIES

HOW THE MANUFACTURING CHEMIST, DRUGGIST AND PERFUMER USE PFAUDLER GLASS-LINED EQUIPMENT



Left—partial view of Glass-Lined Equipment at Lambert Pharmacal Co., used in making Listerine. Right—Pepsodent Antiseptic Mouthwash is made in these huge Glass-Lined Steel Tanks.

Improve your products with Pfaudler Glass Lined Equipment for:

- Storage of essential oils, perfumes, solvents, acids, etc.
- Manufacture of shaving cream
- Mixing of lotions
- Extraction of vanilla and other flavorings
- Vacuum distillation of chemicals
- Distillation of delicate serums
- Manufacture of C. P. chemicals
- Evaporation of salts
- Storage of elixirs, antiseptics, etc.
- Treatment of biologicals.
- Concentration of acids and solvents
- Percolation of drugs and herbs

THE MORAL OF MOUTHWASH

THE phenomenal success of mouthwash and other forms of antiseptics is indicative of the genuine interest of the buying public in sanitation.

To maintain the purity of their products, leading makers use Glass-Lined Equipment extensively for compounding, mixing and aging. The smooth glass surface is easily kept clean at all times. The glass lining guards against metallic reactions.

Such leaders as Lambert Pharmacal Co. (Listerine), Pepsodent Co., Sharp and Dohme (Hexylresorcinol), McKesson & Robbins, Inc., United Drug Co., Frederick Stearns & Co. (Astring-O-Sol), Lavoris Chemical Co., and others use Pfaudler Glass-Lined Steel Equipment.

So the moral is—whether its antiseptics you make or products liable to discoloration or so acid they attack their containers—make them in Glass-Lined Steel. We will gladly tell you why.

THE PFAUDLER CO., 1509 GAS & ELECTRIC BLDG., ROCHESTER, N. Y.
Branch Offices: New York City, Boston, Elyria, O., Chicago, Philadelphia, San Francisco (Pfaudler Sales Co.)

PFAUDLER *glass-lined steel* EQUIPMENT

MULTIMIXERS • STORAGE TANKS • DISTILLATION EQUIPMENT • EVAPORATING PANS • REACTION KETTLES • DOUBLE MOTION MIXERS

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HEAVY—LIGHT

We manufacture and offer the highest grades of U. S. P. White Oils obtainable. They are absolutely odorless, tasteless and colorless.

Our list of these oils covers a wide range of viscosities and a wide range of gravities.

Any Viscosity
From 80 to 345 Saybolt @ 100° F.
Any Gravity .. .. ..From .845 to .900

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Brand names which are a guarantee of finest quality.

These oils have for years set the standard for the best in White Oils. PRIMOL for Pharmaceutical purposes and WYROL and MARCOL for COSMETIC and TOILET Preparations are used throughout the world by the manufacturers of the finest preparations.

• WHITE OILS, INDUSTRIAL

In the general manufacture of cosmetic and toilet preparations these White Oils find widespread use. Outstanding values are offered in the popular brands:

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Saybolt viscosity @ 100° F. 80/90
Specific gravity .. .. .845/.855

MARCOL GX

Saybolt viscosity 65/75
Specific gravity ..... .835/.845

BAYOL F

Saybolt viscosity 50/60
Specific gravity ..... .825/.835

• PETROLATUMS, U. S. P.

	Melting Point SAYBOLT
Snow White Parmo No. 1	125/130° F.
Snow White Parmo No. 2	115/120
Snow White Parmo No. 2F	105/110
Lily White Parmo	115/120
Cream White Parmo....	115/120
Yellow Parmo No. 4F ...	105/110
Ex. Light Amber Parmo.	115/120
Amber Parmo	115/120

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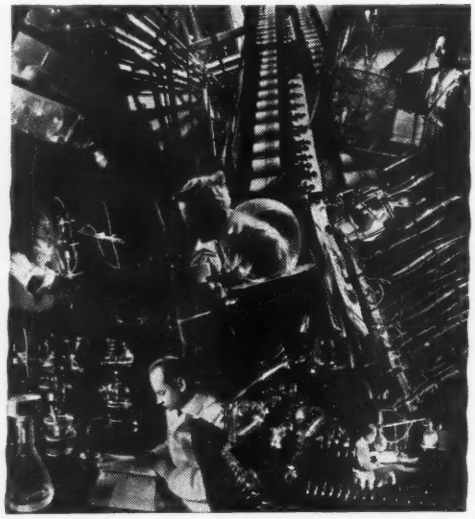

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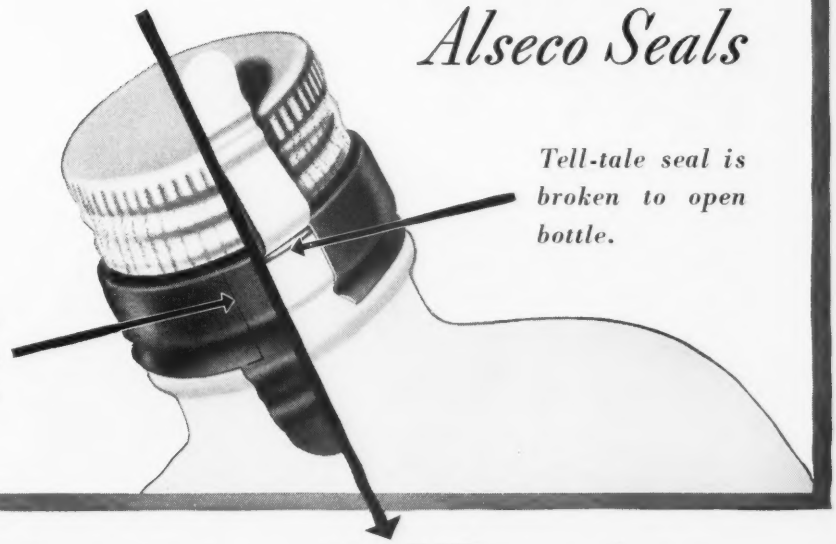

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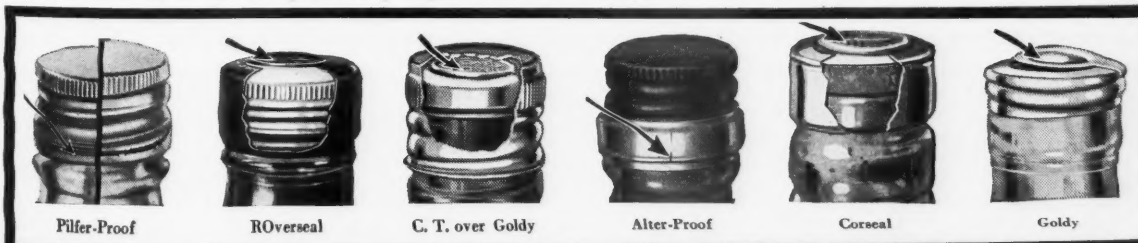

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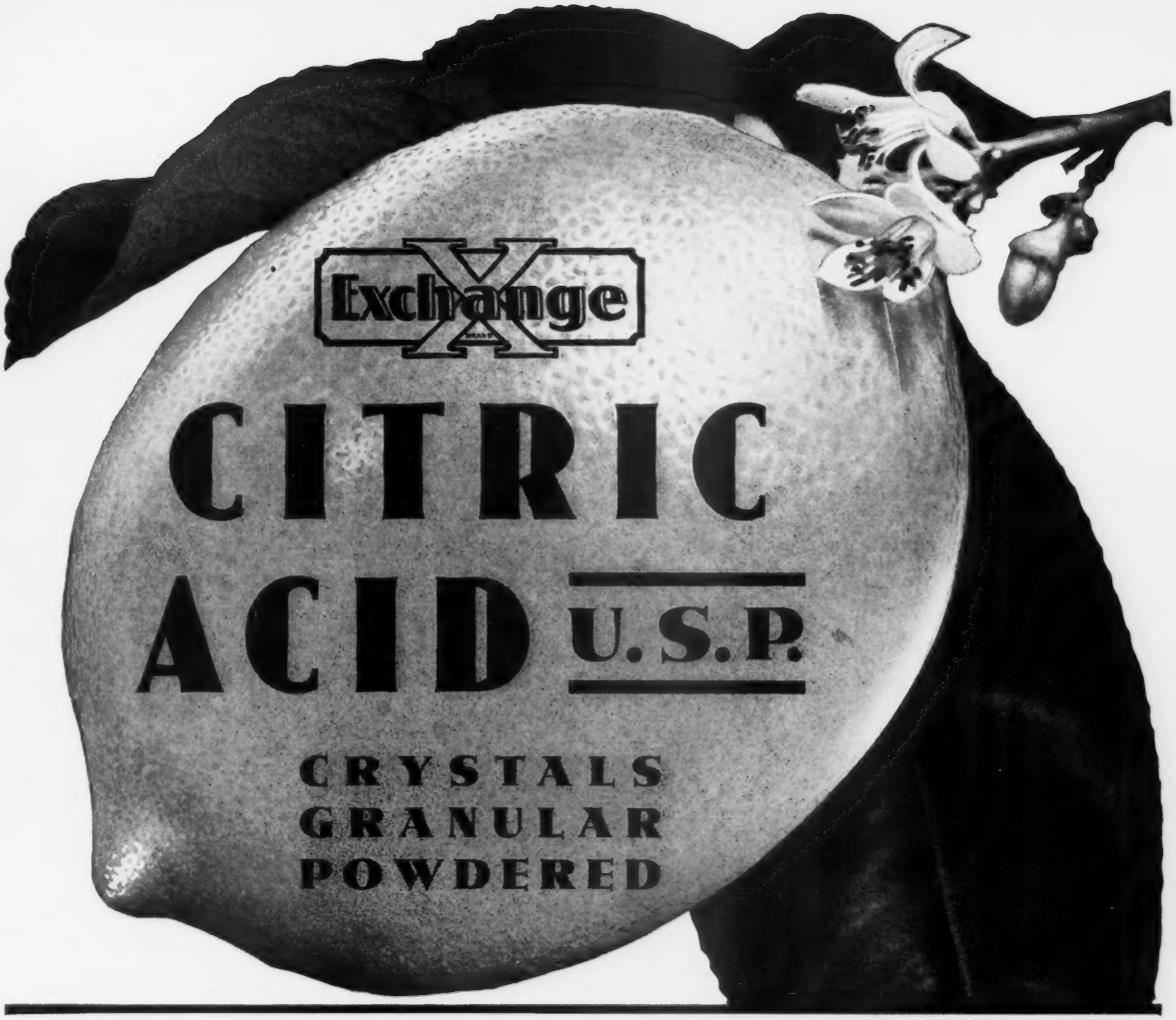

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Immediate shipments from warehouse stocks in New York, Chicago and Philadelphia. For prices on kegs, barrels or carloads, consult any of the following distributors:

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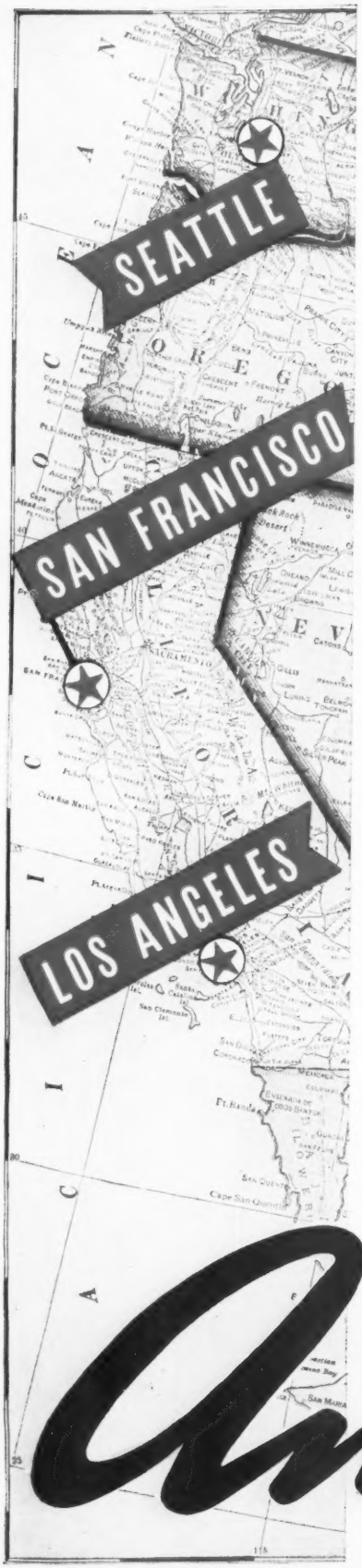

To better serve all who pack in glass

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NATION-WIDE and in Canada stretches the network of the Anchor-Capstan organization. Branch offices, staffed with men of long experience in the specialized problems of sealing and of packaging in glass containers, are maintained in all principal cities. From them Anchor-Capstan representatives go out to serve the food, drug, cosmetic and liquor industries as well as the multitude of specialty manufacturers and packagers.

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If you have a packaging problem, a new product, the redesign of an established one, difficulties of any sort, in sealing or in production . . . there is no obligation, express or implied, in calling in an Anchor-Capstan man for container or closure recommendations.

Anchor Cap & Closure Corporation, Long Island City, N. Y.; **Capstan Glass Company,** Connellsville, Pa.; *Associate Company:* **SalemGlassWorks,** Salem, N.J.

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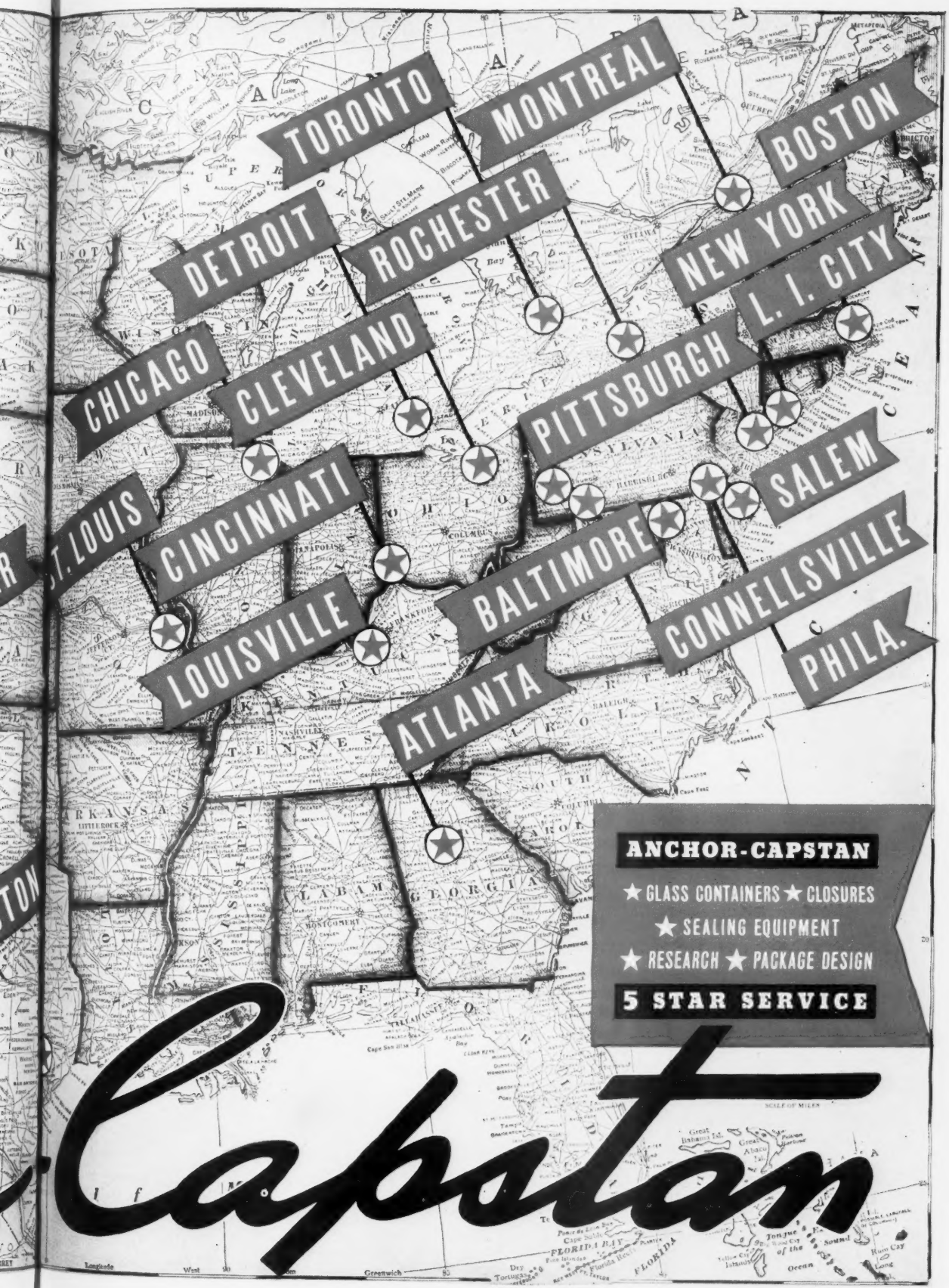
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THE MODERN SOFT CREAM!

A popular new type cream which many manufacturers are making with ISO-BEESWAX

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During the last several months the so-called soft cream has developed into a very popular leader. Its soft texture, its cleansing and nourishing properties have appealed to the American woman everywhere.

The demand for these qualities in a cream has given a great impetus to the use of ISO-BEESWAX.

ISO-BEESWAX makes creams that will remain salable and "like new" long after creams made with pure beeswax by the same formulae have broken down.

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ISO-BEESWAX is economical in use because of its greater emulsifying properties.

ISO-BEESWAX when emulsified has a neutral odor and *requires less perfume.*

ISO-BEESWAX costs less. Its price will always be under that of pure beeswax.

ISO-BEESWAX is a remarkable, technical achievement, developed by adding to pure beeswax, acids, esters and alcohols from other sources, thus scientifically changing the composition to increase the desirable properties of beeswax; but, the totals remain the same, also the melting point, and these agree with U.S.P. tests as applying to pure beeswax.

If you use beeswax, particularly if you are interested in the new, popular type of soft cream, be sure to write us for a sample of ISO-BEESWAX. We will gladly send you this sample, together with a sample jar of new type soft cream made from ISO-BEESWAX and, if you wish, the formula of this cream from which you can experiment to develop your own product.

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HARRISON REFINING COMPANY, Inc.

Producers of Harrison's Pure, U. S. P. Flaked, White Beeswax

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Stocks carried in 14 principal cities and Canada

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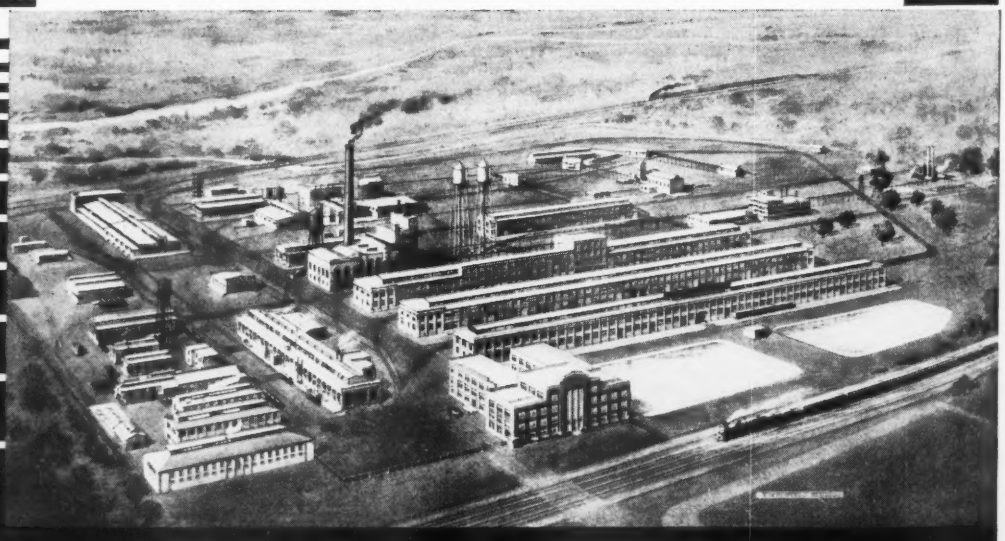

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These are the indispensable things to look for in purchasing perfume materials

INTEGRITY
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Our contacts, years of experience, knowledge and standing offer an unquestioned basis for confidence.

No perfume oil is a bargain if it comes from a questionable source. It pays to be sure.

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WE operate our branch offices where they do the greatest good—in or near cities where producers of toilet preparations maintain their factories. These are not merely sales offices. They are organized and staffed to be of genuine help to you, to give you the answers to many of your production problems, to show you the most effective way of using Fritzsche's products. Here you are assured of prompt, friendly service no matter when or how often you require it. Our branch managers and their associates *always* welcome the opportunity of serving you. Their cooperation is part of the broad Fritzsche Brothers service plan which we gladly extend to *all* users of essential oils, synthetics and aromatic chemicals, whether Fritzsche customers or not.

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"Fragrance Creates Sales Appeal"

78-84 BEEKMAN STREET
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Proprietors of PARFUMERIES de SEILLANS, Seillans, France

"I WOULDN'T SAY 'YES', BUT I COULDN'T SAY 'NO'"

MAYBE Cymanol is just what you have been looking for. It has a pleasant, pungent, woodsy odor. Maybe you could use it for masking some unpleasant odors you have to contend with.

MAYBE you could use Cymanol as an extender for essential oils. Maybe you need it as a base for the synthesis of perfume or a penetrant for textiles.

MAYBE Cymanol mixed with organic solvents would make just the solvent you need for use on gums and resins. Maybe you need Cymanol as a splitting agent for fats and greases.

POSSIBLY you would like to increase the detergent properties of soaps with Cymanol sulphonates.

THE only way you can say "Yes" is after you have given Cymanol a trial.

ASK for a generous sample, give it a test and find out how low the cost is compared with some other less effective material.

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Coupon

"YES", certainly I will give Cymanol a trial. Send me a .....oz. free sample.

I will test it for .....

Name .....

Company .....

Address .....

INDUSTRIAL CHEMICAL SALES COMPANY, Inc.

230 Park Avenue . . . . . New York City
205 West Wacker Drive . . . Chicago, Illinois

MODERN COSMETICS

is now regarded as an indispensable reference work for those engaged in the manufacture of cosmetics. Its four hundred pages of practical, usable information for the manufacturer of cosmetics is the result of more than a year's work carefully compiling and checking information. This is the first practical manual for the manufacturer, covering every phase of cosmetic production. It will be found particularly valuable to the manufacturer with limited technical training.

Contemporary Comment

Published by the well-known journal, "The Drug and Cosmetic Industry," this new book contains much original and unpublished work. The publishers claim that it is a practical book on cosmetic manufacture, containing, in addition to the formulas of up-to-date cosmetics, detailed instructions on manufacturing procedure. Very wisely the co-operation and criticism of a number of leading technical experts were enlisted in preparing the work, so that the 500-odd formulas that are given have all been found to be practically sound. A range of recipes is given for each type of preparation, so that, as far as it is possible to do so, the requirements of individual manufacturers have been met.

The contents are arranged in some forty-six sections, the first of which sets out a general classification of the types of preparation to be met with in the main body of the text, such as emulsions, solutions, soaps, jellies, etc. Apart from the usual types of cosmetic, such as Face Powders, Vanishing Creams, etc., there are sections on less familiar types, such as Beard-softening Preparations, Make-up Preparations (Lip Stick, Eye Shadow, etc.), and Bath Preparations. A section of particular interest to pharmacists is included on Sun Preparations.

The formulas are quite up-to-date, and make use of the latest developments in cosmetic ingredients. For instance, we find triethanolamine included in such preparations as Hand Lotions, Cold Creams, Brushless Shaving Creams and Lotions, Vanishing Cream, etc.

Sulphonated oils are employed in Cleansing Creams, Soapless Shampoos and Hand Cleaners, and Dandruff Removers.

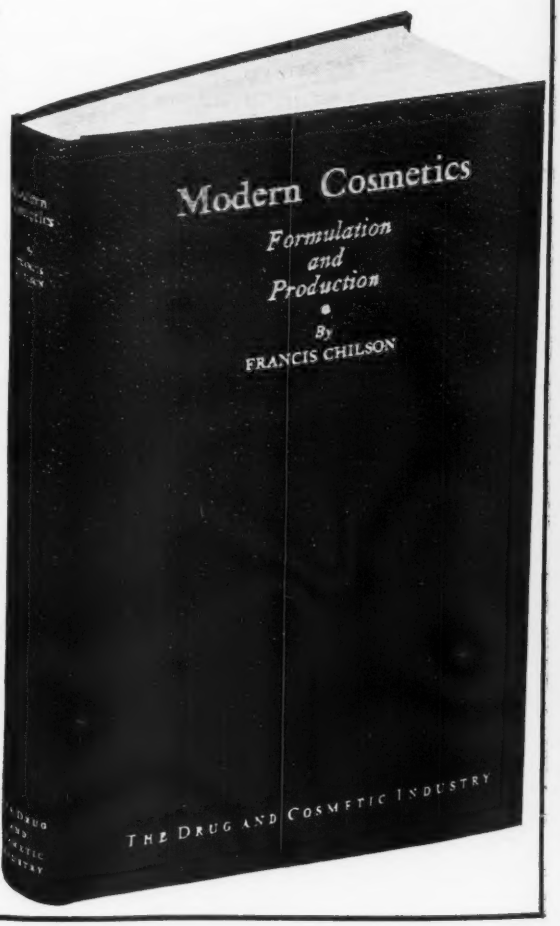
The recently introduced preservatives, Para hydroxy benzoic acid ester, Methyl para hydroxy benzoate and Sodium para hydroxy benzoate, find a place in numbers of formulas.

Much information is given regarding not only the individual types of preparation, but the manufacture, packing and testing of cosmetics. A list of reputable firms who cater for the needs of cosmetic manufacturers is included in a Buyer's Guide. Other sections of interest to manufacturers treat of preservatives and antiseptics in common use, lists of equipment and suggestions for the lay-out of factories.

The publication is essentially practical, and one which should prove very useful to manufacturers. It would be a handy reference book for pharmacists who are specially interested in the production of any type of cosmetic preparation.

—E.E.N. in "The Australasian Journal of Pharmacy."

PRICE: $6.00



THE DRUG AND COSMETIC INDUSTRY
101 West 31st St., New York City

Please send me at once "Modern Cosmetics" for which I enclose six dollars.

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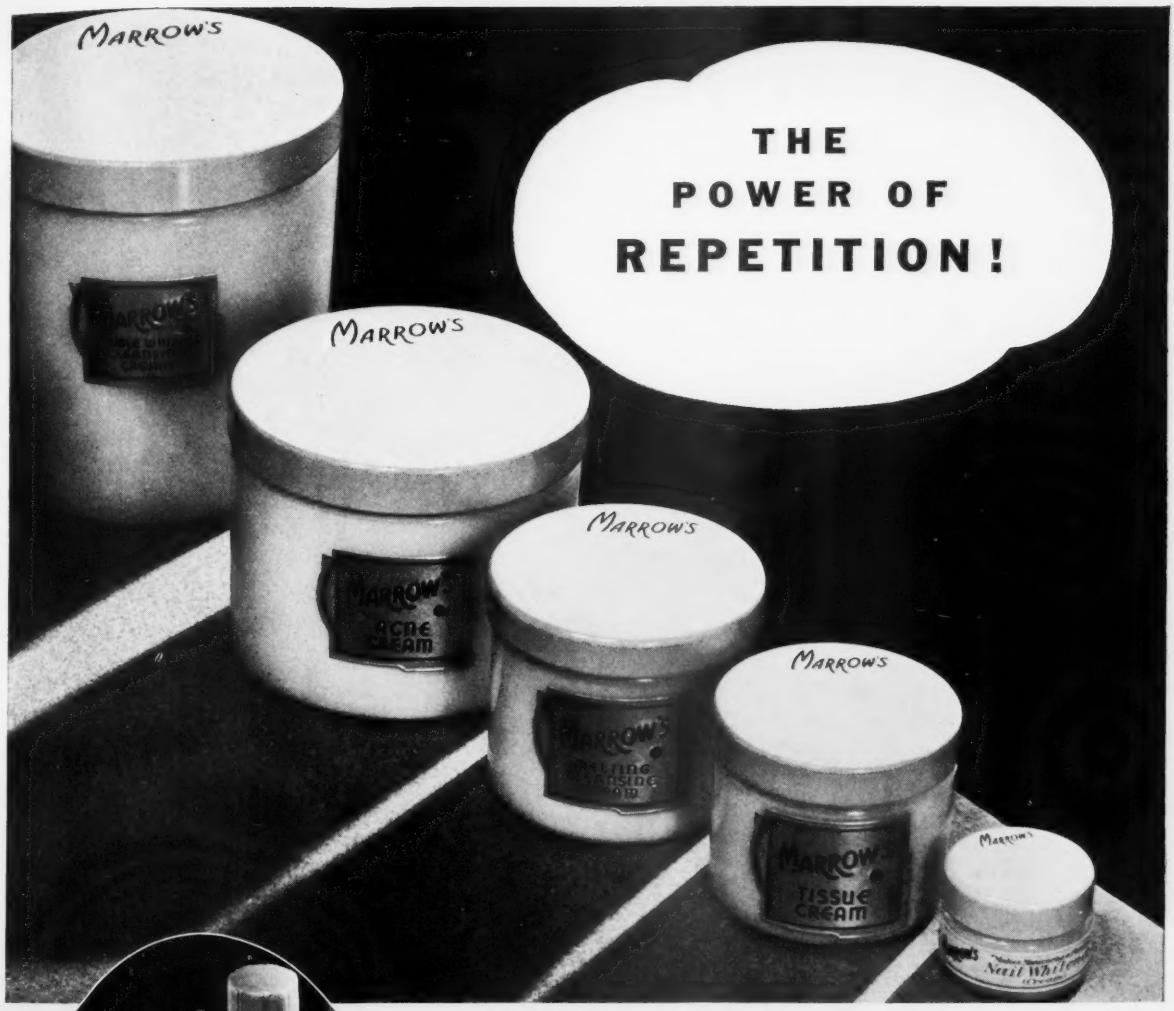
If after 24 hours examination I wish to return "Modern Cosmetics" it is understood that my money ($6.00) will be refunded at once, on publisher's receipt of the book.



The Marrow Family; each package is sealed with an attractive Armstrong Cap. The metal jar covers are specially lithographed; the Artmold bottle caps are a stock design.

. . . *there's a great promotion value in* FAMILY RESEMBLANCE!

EVERY Marrow's package is the world's best advertisement for every other one—because they are all attractive and all look alike. Whenever a dealer displays the line, he displays package after package of the same color, the same smart appearance.

And one of the greatest points of similarity (and beauty) lies in the orchid caps and jar covers. They're Armstrong's. On the jars are double-shell metal caps—easy to remove and replace . . . even with cold-creamy hands. And on the bottles are molded caps of identically the same color!

Let us show how you can dress up your family with Armstrong's Caps. There are all types—at all prices. Single-shell and Double-shell Metal Caps, (lithographed in bright colors), and Artmold Caps in stock or private designs. Get information and samples today . . . and your copy of "A Buying Guide to Armstrong's Closures." Armstrong Cork Products Co., Closure Division, 913 Arch St., Lancaster, Pa.

Armstrong's
METAL & MOLDED CAPS

BISMUTH SUBCARBONATE

MALLINCKRODT

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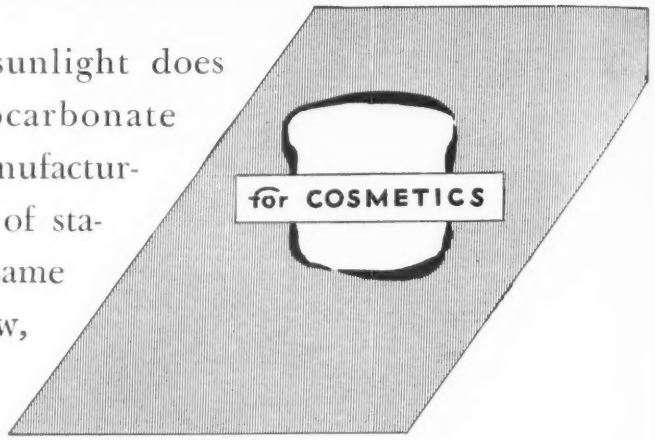

So stable that even direct sunlight does not affect it. Bismuth Subcarbonate Mallinckrodt, used in your manufacturing processes, gives assurance of stability in your products—the same lasting, pure whiteness. The new, special Mallinckrodt laboratory process assures this—and of gritless, smooth and unusual bulk. Face powders, creams, freckle preparations, ointments, etc., are so much softer and homogeneous. You can use Mallinckrodt Bismuth Subcarbonate in your finest and most expensive preparations—for though it costs no more, it is unexcelled in purity and fineness. Samples of any Mallinckrodt Bismuth Salt sent on request.

TENTH ANNUAL TRADE DINNER this year is to be held at the Hotel Waldorf-Astoria on Thursday, March 21, under the auspices of the Drug, Chemical and Allied Trades Section of the New York Board of Trade. Be sure to come!

BISMUTH (METAL) • BISMUTH BETA-NAPHTHOL U.S.P. • BISMUTH CHLORIDE • BISMUTH LACTATE • BISMUTH OXALATE • BISMUTH SALICYLATE 40% • BISMUTH SUBGALLATE U.S.P. • BISMUTH SUBIODIDE • BISMUTH SUBNITRATE • BISMUTH SUBSALICYLATE

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CHEMICAL WORKS

Makers of Over 1500 Fine Chemicals

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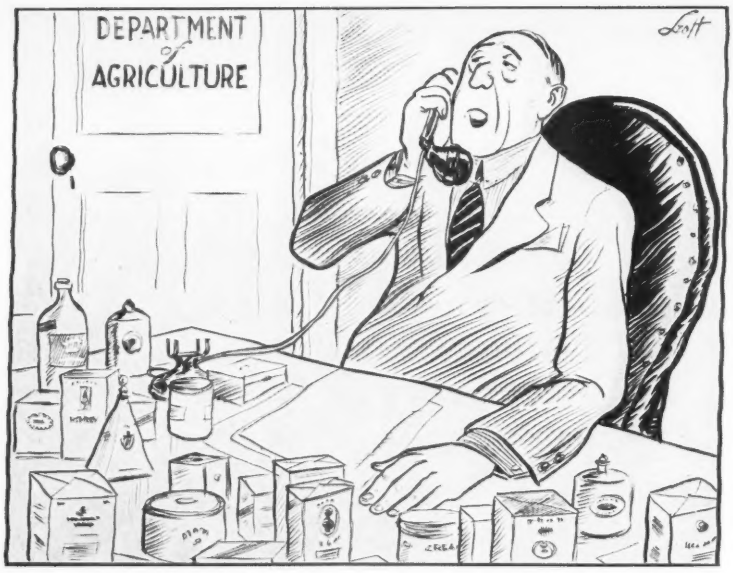
Lower Prices

COMPETITION within this industry never has set such a terrific pace. The smaller family budget is having a most serious effect upon the sales volumes of many manufacturers. Not that the total volume of goods sold by the industry has declined by the great percentage occurring in many other industries, but that the necessary urge for economy has forced the large majority of consumers to learn what they can about ways of saving money in the purchase of drugs and cosmetics.

CERTAINLY it is clear to everyone that the stabilization experiment failed miserably to give the cooperating manufacturers the business that they sought to recover by the cooperation of wholesale and retail outlets. Such a move during this period only drove the consumers to the places where they could buy at the prices they had been paying before. Many of these consumers then found that they could buy other merchandise still cheaper than at the cut prices of nationally advertised goods, and doubtless some business was permanently lost through the experiment.

THE tendency of the direct sellers of private brand merchandise to foster the large or "economy" size package is causing national manufacturers no end of concern. Some manufacturers are attempting to meet this competition in a mild sort of way, but they are not organized to do more than make a few gestures, which in reality prove the soundness of the position of these sizes.

THE answer to the problem is simple, but there are many manufacturers to hesitate to take the step. The move that must be made is to lower prices to the consumer. Most of the expensive merchandising tricks must be eliminated, and this saving must be passed directly to the consumer. Therefore, we shall see a gradual decline in many of the merchandising evils such as free goods, combination offers, advertising allowances, etc., not through any new conception of what constitutes fair competition, but merely through the hard-headed conclusion that business must be done differently today.



"I know I don't write the Pharmacopoeia"

School of Pharmacy
University of

DRUG BILL GOES TO HEARING

The forces operating in various directions on the proposed new Federal Food and Drugs Act came together at the hearing before the Senate subcommittee which opened Saturday, March 2, and which was adjourned until Friday, March 8. Senator Clark, chairman of the subcommittee, presided, and Senators Copeland and Gibson were present.

Charles Wesley Dunn was the first witness, and due to the fact that many important amendments had been made to the Copeland Bill, S 5,—many of the amendments having been accepted by Chief Walter G. Campbell during the hour just preceding the opening of the hearing—Mr. Dunn endorsed the bill with these amendments. These amendments are:

Amendments Made

1. Department will give notice of intention to criminally prosecute a manufacturer, after which notice the manufacturer will have the right to an administrative hearing so as to convince the Administration that the case should not be turned over to the Department of Justice, but should be dropped.

2. Secretary is given right to grant exemptions to the provisions that all active ingredients of products should be stated on labels.

3. When a seizure is made and an action started against a manufacturer, the department must give the manufacturer a sample of the goods seized, and also the method of analysis used by the department.

4. In cases of multiple seizures, one seizure must be made in the home district of the manufacturer.

5. Where "s u b s t a n t i a l medical opinion" is mentioned in the bill, this will be changed to read "substantial *and reliable* medical opinion."

6. A change in the penalty placed upon a manufacturer for not allowing inspection of his factory. In the original draft the penalty was an injunction prohibiting shipment of goods, or in effect a complete shut-down of his business.

Allergic Reactions

Another objection to the bill which was met by Senator Copeland was that of Hugo Mock, representing the cosmetic manufacturers, was the fact that the bill did not provide for allergic reactions in individuals. Senator Copeland said that this would be placed in the report of the Commerce Committee when the bill was reported out so that Congress would be in full knowledge of the fact that instances of allergy were exempted from the provisions of the bill.

There was a constant parade of women witnesses representing various women's associations, all of whom approved the bill and requested its quick passage.

Lee H. Bristol, representing Bristol Myers Company, and William J. Schieffelin Jr., representing the N.W.D.A., objected to the control of advertising by the Department of Agriculture, requesting that this be continued in the Federal Trade Commission.

On this same question, Hugo Mock maintained that the FTC delayed too long in giving final decisions regarding false advertising, sometimes taking as long as five years. Quick decisions were necessary, he maintained, and these could only be obtained by giving advertising control to the Department of Agriculture. Charles Wesley Dunn also spoke at some length on the importance of having advertising control in the Department of Agriculture and not in the FTC.

Other criticisms of the bill were minor in nature, and where apparently justified, were met by Senator Copeland. In fact Senator Copeland felt that the section of the bill naming diseases for which remedies could not be advertised should be changed so that there would be no power on the part of the Secretary of Agriculture to add to it. Such additions could easily be made

by amendments of the bill by Congress, he said.

Variation Clause

Although the minor part of the pharmaceutical manufacturing industry represented by Charles Wesley Dunn has approved the bill, it is known that the balance of the pharmaceutical manufacturers will not approve the bill until the matter of the variation clause is definitely cleared up. It is stated that it is not only necessary for the industry to have this matter cleared up so that variations are clearly permitted in the bill, but it is also necessary for the constitutionality of the bill to have the matter changed. This is for the reason that in the recent "Hot Oil" case, the U. S. Supreme Court decided that Congress could not delegate any of its powers to make laws to anyone else. This means that if the Food and Drugs Act makes the Pharmacopoeia and National Formulary a rigid standard for the bill, the bill will be unconstitutional for the reason that these standards can be changed at any time by people not in the government. From the decision in the "Hot Oil" case, the right of Congress now to accept all future Pharmacopoeias as standard is definitely unconstitutional.

Political Aspects

Aside from these technical considerations of the bill, the most important consideration is the political line-up. During the two weeks preceeding the hearing, the fortunes of the Copeland Bill appeared at low ebb. Senator Copeland had intended to get the bill through the Commerce Committee, of which he is chairman, without holding any hearings. He maintained that hearings had been held last year and were not necessary this year. However, mainly through the efforts of Frank Blair, it is said, and with the cooperation of other proprietary interests, the committee was deluged with some 15,000 telegrams demanding a hearing. Senator Copeland was then unable to get the bill by his own committee, it is said, with the result that he appointed a subcommittee headed by Senator Clark, who it is reported, has been none too friendly to the bill.

Many people came to the hearing with the impression that a bill will be enacted, only to leave with the opposite idea in their minds. However, several other keen observers came to the hearing with the impression that a bill would not be enacted, only to be very much impressed with the progress that had been made.

At the hearing, one wisehead was heard to remark: "if I were Senator Copeland, I would rather the opposition of everybody in this room and have the support of Frank Blair, than to have it the other way around." And Frank Blair, so far as anyone knows is still solidly for nothing other than the Mead Bill.

Many believe that the Copeland Bill in its amended form will pass the Senate, but what will happen when it goes before the House is another question. These people look for a situation to develop in the house which will mean a compromise between the Copeland and Mead Bills if any bill is to be enacted.

Some people believe that it would have been much wiser for the Proprietary Association to have had the Mead Bill introduced by a Congressman from a Western State for the reason that the West seems to get what it wants in the present administration. In that event, the West might have gotten strongly behind the Mead Bill and swept Senator Copeland and his cohorts off their feet.

Compromise Certain

However, we will not have seen the end of the matter by the time the bill passes the Senate, if and when it does. For there are many who are of the firm opinion that Senator Copeland is due for a real jolt if the bill eventually gets before the House.

In the meantime the industry must helplessly await the outcome with the feeling that the bill is far more acceptable than it ever was, and with the feeling also that it will correct the abuses that exist, but still will be a fairly satisfactory bill under which to work. In fact, in some ways it will be a better bill under which to work than is the present bill. Further than this, manufacturers will have a full year after the date of passage to adjust themselves to the provisions of the new bill.

"Who's the Chief of Drug Control?"
"I don't know, I haven't been in there since yesterday."

Courtesy, McKesson & Robbins

CLEANING COD FISH AND RECOVERING THE LIVERS

THE RACE FOR

Cod liver oil potencies are being forced to higher and higher figures as many im-

Where vitamin potencies of cod liver oil are headed and what can be done to control them is foremost in the minds of many importers of cod liver oil and many sellers of bottled cod liver oil and cod liver oil concentrates. The fact of the matter is that there exists a race between certain drug manufacturers to sell cod liver oil of the highest potency. A while back, cod liver oil generally had a potency statement on the label of 500 units of vitamin A per gram. One leading seller at that time had a potency above the general range at 750 units of vitamin A. Another seller had a still higher potency of 1,000 units of vitamin A. And strange enough during all this period, the U. S. P. requirement of potency was only 50 units of vitamin A per gram.

But sometime over a year ago the race started. The manufacturer who had been claiming 750 units of vitamin A per gram, suddenly raised his claim to 1,250 units of vitamin A per gram. Naturally this move caused considerable consternation throughout the industry. Quickly, however, other manufacturers took greater interest in their label statements regarding vitamin potencies and label statements generally began to rise. Perhaps the greatest impetus to this determination of other manufacturers to bring their potencies up to the higher level resulted from the fact that the leading seller with the high potency attempted to sell his oil to the government agencies for the use of the unemployed by claiming that the government was actually buying vitamins when it was buying cod liver oil, and the cost per thousand vitamins of the oil in question was lower than most of the quotations of competitive oils, even though the quotations per ounce or per bottle of oil were not so favorable to the manufacturer in question.

Following the rise to 1,250 units of vitamin A came the revised U. S. P. monograph which automatically multiplied all vitamin A potencies by 1.4 and the potency of 1,250 units of vitamin A became 1,750 units. This potency having been matched by one or more other manufacturers, the leader then raised his potency to 2,250 units of vitamin A. Now it is merely a question of time until one or more other manufacturers will match this latest potency.

Courtesy, Charles L. Huisking & Co.

NORWEGIAN COD LIVER OIL REFINERY AT FOOT OF SNOW COVERED MOUNTAINS

MORE VITAMINS

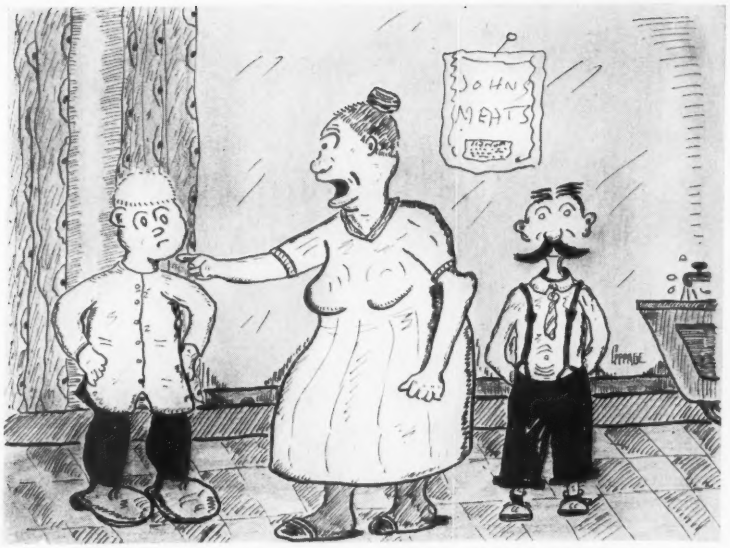
porters and bottlers deplore a condition which they believe is wholly unwise.

During the time that the potencies of vitamin A were being advanced, the potencies of vitamin D were likewise shot upward. While the original U. S. P. text gave no specification for vitamin D potency, the manufacturers generally maintained a potency of about 100 A. D. M. A. units per gram. Some manufacturers maintained potencies slightly above this figure, while other manufacturers maintained potencies slightly lower. But during the race these potencies reached the astounding figure of 750 units per gram. With the change in the U. S. P. monograph, each new U. S. P. unit of vitamin D became equivalent to 3¼ A. D. M. A. units. Therefore, 750 A. D. M. A. units of vitamin D were really 230 U. S. P. units. This has been further increased to 250 U. S. P. units.

Many manufacturers are asking why such a race should exist. In fact efforts are being made by many in the industry to stop what they believe to be an entirely senseless procedure. However, the fact is that the leading manufacturer maintains that when a consumer is buying cod liver oil he is really buying vitamins. Other manufacturers maintain that the vitamin potency of cod liver is important, but when emphasized beyond a certain point, does not mean anything. They claim that it is unwise to stress the vitamin content of cod liver oil beyond a certain point for various reasons.

In the first place, they maintain, the great stress already placed upon the importance of the vitamins in cod liver oil led to the search of other sources of these vitamins and was therefore responsible for the development of Viosterol, halibut liver oil, carotene, etc. And, they contend, if many more reports appear similar to those which have pointed out detrimental side-effects from the use of Viosterol, and the apparent uselessness of halibut liver oil in prevention of colds, the theory of vitamin therapy might be seriously undermined, to the end that the use of cod liver oil might also be curtailed through general confusion on the part of the medical profession and the public itself.

There is no question in the mind of any of these protesting manufacturers that vitamins are not the things exclusively to be sold when promoting cod liver oil. They maintain that cod liver oil has always been effec-



"Well, your father took cod liver oil when he was little."

tive in preventing and shortening the duration of colds and other respiratory infections, as well as preventing and curing rickets. Other recently discovered remedial agents have not been proven as effective as cod liver oil, even though the vitamin effect has been shown to be present they say. Therefore, these manufacturers contend, cod liver oil contains the vitamins in a different form or contains other things, which when given in the form of cod liver oil are effective to a greater degree than any other product.

Another argument which these manufacturers offer against the selling of higher potency cod liver oils is that they are not in effect cheaper to the consumer when bought on the basis of the price per thousand vitamins. For, it is stated, if a consumer pays more per ounce for cod liver oil of very high potency, he saves nothing for the reason that he still takes the same dosage as he would take of the oil of lower potency which would cost him less. The only result of the use of the higher potency oil would be that the consumer would get more vitamins in the use of the oil and, it is claimed, to be questionable whether or not this would be of any benefit. There is also the possibility that over-dosage of vitamins might at some future time be proven detrimental to health.

Consumers generally are not likely to study label statements to the extent of figuring out the cost of the oil on the basis of the vitamin content. One manufacturer who recently raised his vitamin potency statement up into the higher brackets, tells of the great fear in the company as to what disposition was to be made of the oil of the lower potency already in the hands of druggists. After the new oil was distributed, however, the fears of the company were allayed since only one request was received. This was a letter from a druggist asking them to take back the oil of lower potency. Not one request was received from a consumer, and only this one from a druggist. This proved to the manufacturer that certainly the consumers did not pay any too much attention to the statements of potency on the labels, and, as a matter of the fact, the druggists themselves paid very little attention to these potency statements.

As an indication of how far the tendency to increase the vitamin potencies of the various cod liver oils has gone, it should be noted that the latest revision of the U. S. P. monograph requires a minimum of only 600 units of vitamin A per gram, and 85 units of vitamin D per gram. But the revised text of this monograph has been seriously criticized by several people intimately acquainted with the assay of vitamin containing products.

Dr. Bernard L. Oser, of Food Research Laboratories, New York, recently offered a criticism of the monograph from several standpoints. One of the points which he made was that no methods were given in the monograph to check sophistication of cod liver oil with other substances which might be used to increase its vitamin potency. This, Dr. Oser states, is most important due to the higher potency statements appearing on the labels of the cod liver oils now on the market. Dr. E. Fullerton Cook, Chairman of Revision of the U. S. P., answers Dr. Oser by thanking him for the compliment of believing that the Revision Committee would be able to give such methods. Dr. Oser points out that this competition for high potency oils exists not only between producers of oil, but between countries as well.

Importers of cod liver oil and many manufacturers who sell cod liver oil and products containing either cod liver oil or the vitamins derived from cod liver oil itself are naturally interested in protecting the status of cod liver oil. While some of them may sell other vitamin products, they do not want anything to occur that might undermine the true position of cod liver oil—a position that has been rebuilt in recent years after a

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BURNS

The recent swing to the tannic acid and cod liver oil therapies for burns is of particular interest to the entire industry.

EDWARD C. DAVIDSON

The first reports which have followed the use of cod liver oil in the treatment of burns seem to indicate that perhaps another outstanding contribution is being made to burn therapy. The first case reports indicate that cod liver oil not only stimulates growth of the epithelium, but, what is more important, also acts to inhibit the absorption of poison from the burned skin tissue. If cod liver oil fulfills its first promise in this respect, there will be universal rejoicing at this added contribution to the relief of pain but it is safe to say that nothing which could be done in this field, short of elimination of all burns, would equal the relief brought to agonized sufferers by Edward C. Davidson in 1924.

Up to that time there was only one suffering more ghastly than a severe burn—that was the long, horrible agony which must be endured each time a dressing was changed. Surgeons inured to suffering of all kinds secretly dreaded this type of case more than any other. In those days, forty out of a hundred cases serious enough to demand hospital treatment, resulted in death and those who lived carried horrible scars to remind them eternally of the tortures over which they had triumphed. So high a degree of suffering is the human system able to withstand that, strangely enough, most of those who died succumbed to the subtle poisoning which accompanies all burns and not to the shock or the agony following the burn itself.

The fatal nature of the poison resulting from burns had first been demonstrated by the work of a German, Doctor Hermann Pfeiffer, who proved definitely by autopsies on fatally burned or scalded rabbits, that the livers and kidneys were poisoned. He also showed that the blood of these burned animals was deadly to otherwise healthy animals, that even the most badly burned rabbit would live if the burned tissue were removed and healthy skin grafted into place and conversely, if the burned skin were planted in a healthy rabbit, that rabbit died. The German investigator, in addition to

Ewing Galloway

TEA DRYING ON STREETS OF CHINESE VILLAGE

proving conclusively that burned skin was poisonous and that this poison seeped into the blood stream and was carried to all parts of the body, left behind him one more fact which was to prove a valuable clue in directing the course of Doctor Davidson's work. If, before feeding a healthy animal burned tissue, he coagulated the skin albumins chemically first, he found that the healthy animal did not die although death was positive following the feeding of the same amount of untreated tissue.

This much of the trail had been blazed when Doctor Davidson began his work, but, for some reason, it had been forgotten and his first step was to unearth these findings again. His immediate problem, then, was to find a harmless coagulating medium which, at the same time, might form a poison-tight protective layer under the burn. He, too, went to work on rabbits and mice and, although his results were never revealed, he must have come to the conclusion that tannic acid had the greatest possibilities in fulfilling these requirements, for it was to tannic acid that he turned on May 5, 1924.

On that day, there had been a terrific gas explosion in one of the Detroit plants. Seven groaning, screaming or unconscious men were rushed to the hospital where Davidson was the surgeon on duty. To six of the seven he gave the accepted treatment. To the seventh, too, suffering from a horrible third degree burn, he gave the accepted treatment—but only on half the burned area. On the other half he used compresses soaked with a five per cent. solution of tannic acid.

After two days of anxious waiting came the moment for redressing the burns of these seven sufferers. Then began the slow, terrible, agonizing process, worse, by far, than the original burning. Slowly and carefully, but with untold suffering, the dressing was removed from six of the seven. The seventh, too, suffered while the old dressings were removed but when Doctor Davidson started on the tannic acid dressings, both he and the attending nurses were startled, and the patient rejoiced, to find that the compresses lifted right off without any pain whatsoever. And underneath was a stiff, dark, almost black, parchmentlike substance, which fully protected the patient from pain, even from exposure to cold air or to touch.

This second day, too, was the day on which the first signs of poisoning should ordinarily have made their appearance. This seventh patient had some fever, it is true, but not so much as the extent of his burns would ordinarily have indicated. At any rate, the miraculous revelation which accompanied the removal of the tannic acid dressing was certainly sufficient encouragement for Doctor Davidson to go ahead. He replaced the old dressings on all seven with the new tannic acid solution and the result was a complete triumph. None of the seven had any more pain, none of the seven showed any signs of poisoning, and every one of the seven lived and lived without a scar of any kind.

The story of Doctor Davidson's work and the remarkable results secured by his treatment of burns with tannic acid spread quickly and was soon confirmed by doctors in other parts of the world who adopted this technique. With this new method of treatment the fatalities from severe burns were greatly reduced so that ninety out of a hundred now live—without the memory of the agonizing dressing periods or the unsightly scars. Ironically enough, it was only after all of this work and after centuries of suffering from burns, that it was discovered accidently that the Chinese had used strong tea on burns from time immemorial. And, as is well known, one of the chief constituents of tea is tannic acid.

Although the preceeding discussion has to a great extent pointed out the chief characteristics of burns and the important requirements of burn therapy, it might be well to review something of the physiology of burns. The depth of a burn is not relatively so important as the extent of the surface involved. First and second degree burns involve only the epidermis; a third degree burn penetrates just to the upper layer of the corium; a fourth degree burn involves the subcutaneous tissue; while fifth and sixth degree burns penetrate to the muscles and bone. Although a first degree burn is an inflammation penetrating only to the depth of the corium and with proper treatment heals in a short time, if its extent is such that it involves two-thirds of the body surface, it will in all probability prove fatal. Similarly, all second degree burns involving one-half of the body surface are fatal and so on down the line, with the depth of the burn in conjunction with the extent of the body surface involved, determining its severity. However, any burn involving as much as one-tenth of the body surface is serious.

First degree burns are inflammations involving only the upper layer of the epidermis in which the affected area scales off within a short time. Sunburn, for example, is usually a first degree burn and the same treatment is indicated for it as for other burns of that degree. Second degree burns are generally characterized by the formation of blisters. This is, in effect, a defensive mechanism of the body by which fluid is drawn from the tips of the papillae into the epidermal layer. The thicker the epidermis the more difficult is the production of blisters. If the burn is a true second degree burn and the corium is not involved, and if no infection results from the burn, no scar results. The third degree burn is the most painful type of burn since it leaves the nerve filaments bare and exposed. However, the sebaceous and sweat glands and hair follicles are uninjured.

Ideal local treatment for burns should first of all provide relief from pain. As the principal cause of pain from burns is air—particularly cool air—any protective measure which excludes air is immediately desirable. A suitable local anesthetic is also indicated to further this relief. The second most important end to be secured is prevention of infection for the skin has lost its impermeability to disease germs and the burn, which

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Ewing Galloway

THE CHEMISTRY OF LIPSTICKS

By Thorpe Deakers*

In this article I want to discuss the chemical problems occasioned by the present demand for a highly indelible, non-toxic lipstick. The first and most important problem is, of course, that of achieving the indelibility. Formerly vegetable dyes or alloxan were used to secure the permanent stain. However, the vegetable dyes were cumbersome to extract, and the alloxan, because of the slowness of the stain and its toxic nature, has been replaced by the so-called "bromo acids," usually the di-brom or tetra-brom derivatives of fleurescein. These bromo acids give a high permanence of color, but only when the proper solvent has been selected. Many of these solvent bases have been investigated, but none seems as satisfactory to me as castor oil although it, too, has certain disadvantages; so I will discuss it rather than such solvents as butyl stearate and other esters which have been examined for this purpose without much success.

The effectiveness of the bromo acid depends on its being in solution, where it reacts with the skin tissue to produce the stain. The bromo acid is not soluble in mineral oil or paraffin, but dissolves in castor oil to a certain extent. However, even when it is in a solution of castor oil, if too much mineral oil or paraffin are present in the stick composition, the bromo acid will precipitate out of solution and not give the desired quickness of indelibility, or permanence of stain. Once the castor oil has been definitely selected as the solvent there still remains the problem of overcoming its taste. Therefore, only the best brand of so-called tasteless castor should be used. In addition, the bromo acid reacts with the castor oil to form new compounds in the sticks which are irritating to some people. These people are not sensitive to the bromo acid or the castor oil when used separately. Experimental evidence indicates that this sensitivity arises from the synthesis of compounds formed when two bromine atoms go off the tetra-bromofleurescein molecule and attach themselves to the unsaturated bonds of the ricinoleic acid present in the castor oil. It is logical to deduce, then, that either the di-bromoricinoleate formed or the di-bromofleurescein remaining causes the irritation to the skin. How can one avoid this difficulty and still get the necessary indelibility? Care should be taken not to use an excess of either the bromo acid or the castor oil. About five per cent of uncut acid and fifteen per cent of castor oil proves an excellent combination, and should not be exceeded, although some firms still persist in manufacturing lipsticks with a castor oil content higher than fifty per cent.

One must bear in mind that castor oil is not miscible in mineral oils and hydrocarbons. Recently a castor oil soluble in mineral oil has been developed. This

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specially treated oil is an excellent solvent base, far superior in many ways to ordinary castor oil, but it possesses such an objectionable odor that its use in lipsticks is at present not possible. If the odor could be eliminated, it would make an ideal lipstick solvent.

The next step in making a lipstick is the building of the base. An ideal stick should go on the lips in a very thin layer; should have a melting point around 118 °F.; should possess sufficient tackiness, and should not leave the lips feeling unnaturally stiff and greasy. It should be tasteless and permanent in color, remaining the same shade the period of time it is on the lips. This calls for a blending in color between the under tone caused by the reaction of the bromo acid and the skin and the top tone due to the toners and lakes used to pigment the stick. The color distribution must be uniform.

Since hydrocarbons, such as paraffin, do not mix with castor oil, it is necessary to use fats, oils and waxes of vegetable or animal origin in making a stick using castor oil as the solvent; these tend to form a more perfect mixture with the castor oil than do the mineral oils, and also act as binding agents. One must remember, however, these substances tend to become rancid, and care should be taken to preserve them in a lipstick base. The best preservative for this purpose is para-hydroxy-propyl-benzoate. In my opinion a good lipstick should have about seventy-five per cent. vegetable and animal oils and waxes. The remainder may be mineral oils and paraffins.

Lanolin is an important ingredient in a stick because it gives the tackiness so essential to keep the toners and lakes from rubbing off. It imparts to the finished product a smooth-grained appearance necessary to keep the stick from crumbling. Lanolin also acts as a binder to hold the castor and mineral oils together; it prevents sweating of the oil on the outside of the stick in most cases. The percentage of lanolin should range between five and fifteen. If one goes over fifteen per cent., the product is likely to become too sticky. Lanolin helps counteract the irritation and drying effects on the skin caused by the bromo acid. Because it is so readily absorbed by the skin tissue, it deep roots the stain and secures greater indelibility.

Beeswax is the next most frequently found substance in a lipstick base. It gives a good consistency to the base and together with the lanolin aids in binding the castor oil, for beeswax is almost as soluble in a lanolin-castor mixture as it is in a hydrocarbon combination, such as paraffin. Beeswax also because of its shrinkage properties makes the expelling of the finished stick from the mold a much simpler process. Chemically the wax stabilizes the bromo acids in the stick by the presence of the free melissic and cerotic acids contained in the beeswax itself.

There are some disadvantages in the use of beeswax which have to be reckoned with. One is the slow change in the crystalline structure of this substance with time. If beeswax is heated until it liquefies, and then is poured on a flat surface where it is allowed to crystallize, this change can be seen. The time of the change varies with the beeswax and the climatic conditions. Therefore, a stick must age approximately two weeks before its real consistency can be judged, for a pomade which appears perfectly homogeneous at first may in time grain and crumble. A further disadvantage of beeswax is the deadening effect which it exerts upon the general tone of the lipstick. To produce a shiny, brilliant lipstick a low beeswax content is necessary. Ten per cent. of beeswax should never be exceeded.

Ceresin resembles beeswax in many of its properties and should be used along with beeswax. This earth wax is a fair binder with about the same consistency as beeswax, but it does not have the shrinkage property of the latter. The crystalline structure of ceresin does not tend to change with time, for once this ingredient has crystallized out in the mixture no further change will be noted. Beeswax and ceresin can be used together in order to secure a fine-grained mixture; as each product furnishes a complement of properties to the other.

Ozokerite resembles ceresin to some degree, but appears to be a trifle less on the paraffin side than ceresin. Its use in a stick makes for a more easily crushable wax mixture. If this result is desired, ozokerite is the material to be employed.

A lipstick must have a stiffening agent, so that when it is applied to the lips, the stick does not break in two. Such an agent is carnauba wax, which blends well with all the ingredients in the stick. Too much carnauba wax will give too high a melting point, and the stick will become brittle. Ten per cent. of carnauba wax, depending on the other ingredients in the base gives a good mixture.

Paraffins of both low and high melting points are important, for they are not absorbed by the skin and function as lubricating mediums. Paraffin is used as a hardening material to impart rigidity, and also because its shrinkage properties, when it crystallizes, assist in expelling the finished stick from the mold.

Mineral oil is also necessary as a lubricant. A stick should not pull as it glides over the lips, and this ease of application can be achieved only by the use of mineral oil. It gives to a lipstick that shiny appearance so necessary here in the west. The percentage of mineral oil in a good stick should never go beyond fifteen, or else there will be a loss in the tackiness of the film to the lips, and the toners and bromo acids will easily come off.

Petrolatum, a hydrocarbon, when employed should be of the short fibre type. Its presence adds to the consistency of a stick, yet if the proportion of petrolatum exceeds ten per cent. a rather thick, greasy film tends to be formed on the lips. Personally I favor a very low petrolatum content for best results in lipstick formulation.

Absorption bases are also important ingredients in a stick, for they serve to decrease the irritation and dryness caused by the reaction of the bromo acid. These bases are very closely allied to lanolin but do not possess

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ASPIRIN

Aspirin—the most commonly used analgesic available—forms a most considerable part of the drug business. Unfortunately for the sellers of Aspirin tablets, however, the trend of prices of tablets has been steadily downward and any manufacturer attempting to follow the prices to the lowest limit will probably reach a condition at which he is merely "swapping dollars" without deriving any profit for his efforts. But this downward trend of prices has doubtless caused greater consumption of Aspirin tablets, since it has further reduced the cost to the public of what has been for a long time the cheapest headache remedy on the market.

Aspirin tablets are now sold as low as 15 cents per bottle of 100 over the counter by direct sellers of private brands. Recently Squibb introduced a bottle of 200 Aspirin tablets, this being a new quantity size for Squibb. Recently, also McKesson & Robbins went further than this and introduced an over-the-counter bottle of 500 Aspirin tablets, reported to be available in New York at 69 cents over the counter. Since the usual dose of Aspirin for a headache is two tablets, the cost of curing a headache with these low-priced tablets is no more than three-tenths of one cent, or ten headaches can be cured for three cents.

But despite this trend to sell the consumer the larger sized package of Aspirin tablets for the home or office medicine cabinet, there are one or two manufacturers who still sell a greater number of tins than they do of bottles. Some nine or ten years ago, practically all manufacturers sold seventy-five or more per cent. of tins, and only twenty-five or less per cent of bottles. Now the trend has swung so that some of the sellers find that their sales of tins are equal to their sale of bottles, and they find the trend to the larger package so strong that they expect to see the day when the sale of bottles will be twice that of tins.

However, one or two leading sellers whose goods are better known to the public still sell approximately seventy-five per cent of their units in tins, and twenty-five per cent in bottles. It is said that outside of these two manufacturers, the other producers of Aspirin tablets do not sell enough tins "to keep themselves warm." The reason for this is plain: when a consumer enters the drug store to buy a tin of Aspirin he is not very price conscious. The unit is small and fifteen cents will buy the highest priced one in any store. Therefore, this business goes to the better known manufacturers without much of a struggle. But when the

consumer goes into the drug store to buy a bottle of 100 tablets for the medicine chest, he or she is in the nature of a wholesale buyer. That is, he or she is price conscious and is buying the larger size partly for the purpose of saving money. These buyers, therefore, are much more likely to be swayed by the lower prices of the less known brands. This accounts for the fact that the less known brands sell such a high proportion of bottles.

But the expanding market for Aspirin is not alone coming through the channels of increased sales of five grain Aspirin tablets. The desire on the part of manufacturers to market products using the analgesic properties of Aspirin, but products which will not come into the terrific price competition which exists in Aspirin tablets. Some time ago, therefore, Calco Chemical Company introduced Magnespirin, a combination of Aspirin which is claimed to be more effective than Aspirin for equal dosage. Now we find Cal-Aspirin—a simple mixture of calcium gluconate and Aspirin being introduced as an Aspirin preparation of greater effectiveness than Aspirin for equal dosage.

In other ways, also is the use of Aspirin being extended in new products. Aspirub, a penetrating ointment containing Aspirin is being strongly merchandised for use as a chest rub and for use in the nostrils in the treatment of colds. If the claims of this product are fully justified, we should hear a great deal of it and the use of Aspirin should be extended by a considerable amount. Likewise, such a product as Alka-Seltzer—one of the real big sellers in the drug trade—carries on its label a statement that it contains "acetyl-salicylates," which means Aspirin in some form or other. Doubtless the hoard of imitations of this product also contain the same important ingredient.

Beside these more recently introduced Aspirin preparations, there have, for many years, been on the market many other combinations of Aspirin such as Burroughs Wellcome Company's Empirin Compound tablets. These tablets contain Aspirin, acetanilid, and caffeine citrate. Rexall headache tablets likewise contain among their ingredients, Aspirin and acetanilid.

During the year 1933 production of Aspirin in this country reached the total of 3,153,790 pounds, according to the U. S. Department of Commerce. If the entire quantity of Aspirin produced had been converted into five grain-Aspirin tablets, the number of tablets produced would have reached the astounding total of 4,214,126,000. However, the number of tablets produced during 1933 was somewhat below this figure due to the other uses of Aspirin. All things considered, however, it is likely that the value of the business done by the various retail sellers of Aspirin from the ethical drug stores to the roadside stand and gas stations in 1933 was somewhere between $15,000,000 and $20,000,000. Without question the value of this business increased considerably during 1934, and it will increase considerably again during 1935.

The Race For Vitamins

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period during which the doctors were wont to snub cod liver oil therapy even though the oil had been used empirically for a long period of years. The position of cod liver oil, these people feel, is firmly established in the minds of physicians and laymen alike, but the dreadful confusion that must come into the mind of anyone who attempts to follow the claims for all the various new vitamin products plus all the various clinical reports and discussions of methods of assay and what they mean, must tend to upset the confidence that has been built up in the therapy of cod liver oil.

Some interested parties are of the opinion that the U. S. P. monograph on cod liver oil should specify minimum and maximum limits of vitamins A and D. This range could cover all the various potencies which are found in natural oil properly handled. It is true that this might place a slight damper on the efforts of manufacturers to obtain oils of higher potency, but it is felt that good cod liver oil of normal potency is all that is needed to give the proper results, and oils of unusual potency could be marketed in accordance with the variation clause of the U. S. P. Certainly, it is pointed out, no such variation in potency of other natural products is allowed if the products are to be labeled U. S. P. Variations due to source or season in such other products as ergot, digitalis, etc., must be eliminated before the product is placed on the market. If ergot or digitalis is of twice the potency specified by the U. S. P., it is just as grossly mislabeled as if the product were only half the specified potency. If a manufacturer wishes to market an ergot or digitalis which is above the specified strength, he may do so by indicating on the label the fact that the product is of higher potency than U. S. P. and stating this variation. In like manner, therefore, cod liver oil of higher potency than the limits of such a monograph could be marketed by indicating any unusual potency on the label.

Burns

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at first was probably sterile, may easily become infected.

The most recent contribution to the treatment of burns has been that made by Edward C. Davidson of Detroit, who first advocated the use of tannic acid in burn therapy. The tannic acid acts to coagulate the devitalized tissue—in effect it tans the membrane—thus protecting the tissue underneath and preventing infection. Picric acid has been used for this same purpose for years. Che ron first pointed out its possibilities in 1876 and Thiery was the first to use it in burns about the same time. It also coagulates the burned tissue, forming an artificial scab and speeding the growth underneath. Both substances are analgesic and antiseptic in action thus providing the two important factors of burn therapy.

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SKIN FATIGUE AND SENSITIVITY

"Tired Skin" or "Skin Fatigue" is of keen interest to makers of shaving creams, skin medicaments and cosmetics. It is because of this condition, about which very little is known, that external applications may cause irritation when the user is tired and not when he is rested. We present here the first paper ever published in this country on the subject.

By Everett G. McDonough, Ph.D.*

The simplest questions are often the most difficult to answer. The obvious frequently defies explanation whereas the obscure may have expositions written about it. Water for example is our most abundant single substance, and generally, although ignorantly, accepted as having quite a simple structure. Yet our knowledge of it was so superficial that the discovery of an isotope of hydrogen revealed a new heavy water that has opened up a tremendous field of research.

Thus when the simple question was asked: "Why does it hurt my skin more to shave when I haven't had enough sleep and also on the morning after the night before?" I hesitated to reply although the answer appeared to be simple. That a change is evident in the skin's sensibility when sleep is needed is confirmed by the fairer sex with the statement that "my skin is so sensitive when I am deprived of my usual hours of sleep that I can barely stand to powder it."

Logically the question breaks down into a consideration of sleep and the cutaneous nerve system, or more specifically, pain. And when you arrive at this point your troubles begin, for you again have two simple terms; two of the most common human experiences. They are too simple, for when legends spring up you can be pretty sure they are means of avoiding an admission of ignorance. The word sleep, almost immediately recalls the story of "Rip Van Winkle," or to the more religious minded, the "Seven Sleepers of Ephesus," or to the historian the tale of the Cretan poet and soothsayer, Epimenides, who fell asleep for 57 years and awoke to find his brother an old man. These and many more weird tales are told to coax children into the state of relaxation necessary for sleep in the so-called bed time story. As for pain we even have "isms," the sadism and masochism.

*Chief Chemist, Marinello, Inc.

So far I have successfully avoided a direct definition of sleep or pain. What is sleep? According to the dictionary it is a state or period of complete or partial unconsciousness, normal and periodic in man and in the higher animals. In animals it may be prolonged as in hibernation. This appears to be a good definition, especially when many refer to sleep as natural rhythm, activity being followed by rest; energy by torpor; mobility by quiescence; waking by sleeping. This seems to be a logical law of nature that may be classified under the general heading of "Action is followed by an equal and contrary reaction."

There is no doubt that unless the cycle is completed, the body suffers, and one of the resulting manifestations is a sensitive skin. The beneficient action of sleep upon the body, and particularly upon the psycho-physical functions of the central nervous system, is a recognized vital necessity. The human body can be deprived of food for weeks but the loss of sleep for an entire week has been known to result in death and even a shorter period has resulted in mental derangement.

The cause of sleep might throw much light on the relation of skin fatigue and sensibility, and body rest. There are numerous theories, each an explanation from a different scientific viewpoint.

Though chemical theory expounds the fact that in the active state, products of fatigue result and accumulate, resulting in a necessity for sleep to allow the body to remove these products. The accumulation of lactic acid is commonly known to be the cause of muscular fatigue. Many believe that sleep is needed in order to rid the body of this fatigue-producing lactic acid. Since reports indicate that during exercise a relatively large amount of lactic acid is noticeable in the perspiration, is it not possible that the increased irritability of the skin might be due to the need of the

lactic-acid-removing sleep? Still others believe that the chemical cause of sleep can be traced to a respiratory factor whereby carbon dioxide is the chief offender and that sleep is caused by a carbonic auto-narcosis. Again we have the possible explanation of skin irritation since one of the functions of the skin is respiratory; in a normal individual it is about 1% of the pulmonary respiration. Also of known significance is the fact that the neurons (nerve cells) are restored by oxidation.

There are two theories to explain the histological cause of sleep. One (Lépine) states that it is due to retraction of the neurodendritis (dendritic or protoplasmic extension of a nerve-cell), so as to isolate the neurons and thus inhibit the transmission of nerve currents; the other (Lugaro) is just the opposite. He states that the sleep is favored by prevention of mental concentration due to the gemmules on the dendrites being prolonged and protruding so as to contact all others and thus diffusing the nerve current. In either case the histological explanation is based upon the neurons and since pain is transmitted by neurons it would follow that any abuse to the neuron-sleep mechanism would result in an accentuated pain stimulus.

Biologically, sleep is a defense mechanism. The tired person must rest and is obliged to sleep, otherwise the toxins created while awake would poison his system. Some even believe that the toxins act as soporifics.

Endocrinology advances the theory that sleep production is a function of the ductless gland. In support of their views is the fact that the thyroid is enlarged before an animal hibernates.

The two other remaining theories are based on blood mechanism. The Durham's circulatory theory suggests an ischemia (local anemia) of the brain; a contraction of the cerebral vessels being observed during sleep. The Osmosis explanation—sleep is caused by an increased viscosity of the blood brought about by dehydration while awake. That there is a relation between the water-salt content of the body and fatigue is shown by two statements; "Drinking of physiological salt solution in place of water in such circumstances (miners at work) has resulted in far less fatigue." "The drinking of acid sodium phosphate is also stated to reduce fatigue on hard marches." It does appear reasonable that lack of sleep would result in injurious consequences to those organs upon which the body depends for its secretary functions. Since one of the important ones for water and salt elimination is the skin, it can readily be appreciated that body fatigue would mean skin fatigue, which would result in an increased skin irritability.

Support for this can be read into recent related reports. Mayo points out that whereas sleep is generally looked on in relation to consciousness, and to the brain and certain parts of the central nervous system, and not with respect to the automatic system and its function, that much can be found in support of Howell's theory of sleep that is based on fatigue and loss of tonic action of the vasomotor centers. "We find that in sleep, the constant secretions of the body are diminished and that there are decreased amounts of urine, tears and secretions of the mucous glands. One of the first signs of sleepiness is the rubbing of the eyes due to their dryness. The blood pressure falls in sleep due both to vasodilation and to slowness of cardiac rate." Laird has written many articles on sleep and its effect on daily activity. Some of his remarks that might be applicable are—"Fatigue is the diminished capacity for doing work. It stamps the personality with peplessness and marks the face with lines and drooping muscles." On a long list of questions the answer of yes to which meant need of sleep or fatigue, the following two were picked as being related to our present discussion, "Did you perspire without exertion to cause it?" "Was there any itchiness or creepiness on your skin?" Also Laird places great importance on the dream-life that accompanies sleep. Like Frend he feels that dreams are the safety valves of our emotions; without this emotional outlet of sleep we are inclined to be easily irritated and sensitive. Whatever may be the reason, every physician knows that sleep, even forced, accomplishes a great deal for many patients who are suffering from hypersensitive or exhausted nervous systems.

That lack of sleep can cause increased irritability and sensitivity of the skin seems to be explainable by most of the theories of what causes sleep. The sensation of skin pain, that is, the manifestation by which we recognize this increased skin sensibility requires a brief explanation. To go into a detailed discussion of the nervous system would require too much space for this elementary article. It must suffice to say that the systems of nerve fibres still seem to be in a hypothetical state and open to criticism. The classical work of Head and Rivers with their two hypothetical systems of nerve fibres, which they give the exceedingly apt and attractive names of protopathic and epicritic, has been most generally accepted but has received some criticism. One of these presents this interesting concept, "In the peripheral sensory nerves there are two sharply differentiated classes of fibres; first, the pain fibres relatively insensitive to fine stimuli, and set to yield energetic explosive responses; and, secondly, the fibres for tactile and thermal sensation sensitive to the finest stimuli and muted down to yield only sensations of a mild and non-explosive quality in regards to which unperturbed discrimination becomes possible." Pain is peculiar among sensations in being originated in and transmitted by a nerve-fibre of which the terminal ramification is uninsulated, and in having no specific stimulations. All other sensations are excitable by one stimulus which can be expressed as a single physical process. Touch is excited by a moving contact, heat by a transference of heat to the body, cold by abstraction of heat from the body. On the other hand, pain is excited by a whole series of stimuli which can not be generalized under any single character except perhaps the rather fantastic one that they might be harmful if they were stronger.

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Ewing Galloway

COLD BALMS

In this season of greatest incidence of colds and other respiratory diseases, we present the latest information on one important type of remedy.

When a doctor prescribes a standard proprietary remedy it *must* be good. The average physician prefers to be more mysterious. He jots down a hieroglyph on a prescription blank; the druggist gets it, removes the label from the fifty cent proprietary, puts on his own and charges the patient, customer, client—or just plain sap—one dollar fifty for it. So, we repeat, when a product is of such superlative merit that doctors and public alike accord it the favor of continued use, and when, moreover, the doctor voluntarily surrenders his right to be mysterious, then the remedy really must be good. Such is the position of one of the world's most famous analgesic cold preparations. There's nothing mysterious about this chest rub. It does its job thoroughly and well because it is based upon a very ancient but none the less sound therapy, namely, the stimulation of circulation and the retention of heat.

The modern chest rub is a son of liniment out of ointment; yet in a sense it is older than either. Throughout biblical literature re-occurs the phrase "they *rubbed* him with an healing ungent." They *rubbed him*, mark that. We call it massage. By rubbing in an ungent we stimulate circulation and by retaining heat we bring blood to the congested area. But modern rubs do somewhat more than this owing to the vaporization of volatile medicaments contained in them and the inhalation of these vapors while the sufferer sleeps. When the ungent is rubbed in we coat the affected area with a film of oil which tends to prevent the escape of heat.

It is recommended, however, that reliance be placed not alone upon the ungent, but also upon the facilitating action resulting from the preliminary application of hot towels and the subsequent covering of the treated area with a piece of flannel. By so doing we stimulate circulation in the affected area, we open the pores so that the ungent can penetrate more readily and we further help to retain body heat. Congestion simply means that waste matter and toxins are accumulating in the affected area and are not being carried off either by the blood or through the skin. If we can get the blood circulating freely and the pores open again we've all but won the battle against cold. This may be accomplished by a stimulating rub properly applied.

An analysis of the function of a chest rub brings us to the question as to whether the rub should be an oily mass or an emulsion, and if an emulsion, should it be a water in oil or an oil in water? In one sense the question is definitely answered by the nature of the most successful products in this field. Precedence and preference indicate that the oils have the field: ancient goose grease or turpentine; modern hydrocarbon oils and jellies. This would seem conclusive enough but dissenting opinion points to the equally ancient and effective—some say more effective—mustard plaster, which is a paste made with water, and to the glycerinated clays which have performed long and honorable service in the relief of congestion. In our own opinion the ultimate answer will be given by the public which prefers that product which gives prompt relief and which is easy to apply and is not too messy.

Here are some experimental types:

No. 1. Petroleum Jelly Type

Menthol	.7%
Methyl salicylate	5.8 "
Camphor	8. "
Eucalyptol	5. "
Mustard oil	.5 "
Soft, short fibre, white petrolatum	80. "

Procedure: The menthol and camphor are dissolved in the mixed oils. The petrolatum is melted at about 105° F. and the medicament mixture stirred in.

No. 2. Petroleum Jelly Type

Menthol	.7%
Chloral hydrate	9. "
Camphor	9. "
Methyl salicylate	10. "
Oil of cade	5. "
Soft, short fibre, white petrolatum	66.3 "

Procedure: As above.

No. 3. W/O Type

Menthol	1%
Mustard oil	1 "
Eucalyptus	15 "
Camphor	1 "
Absorption base, derived from lanolin	30 "
Water	45 "
Stiff, long fibre, white petrolatum	7 "

Procedure: The menthol and camphor are dissolved in the eucalyptus oil and the oil of mustard is added. The petrolatum is melted, the absorption base is added. One should be careful not to allow the temperature of the melt to go above 45° C. The eucalyptus mixture is stirred in, then water, heated to 45° C., is slowly stirred in. Mix steadily until a homogeneous emulsion forms. Then stop mixing and allow the batch to stand until cold before filling. If this ungent is too soft a small amount of beeswax or paraffin may be added.

No. 4. O/W Type

Glyceryl monostearate	12.0%
White beeswax	6. "
Methyl salicylate	5. "
Menthol	1. "
Camphor	1. "
Mustard oil	.5%
Water	74.5 "

Procedure: The glyceryl monostearate, beeswax and water are put into a kettle and heated until the monostearate melts and the whole mass becomes white and homogeneous. The camphor and menthol are dissolved in the methyl salicylate and the mustard oil is added. When the cream mass has cooled to about 50°C., the medicament mixture is thoroughly stirred in. Consistency can be changed by changing the percentage of beeswax. This product is characteristic of the so-called "greaseless balm" types of product.

Chemistry of Lipsticks

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the stickiness which the anhydrous wool fat does. An absorption base emphasizes the life of the film on the lips. Due to its high oxycholesterine content it has excellent ungent qualities.

Cetyl alcohol has risen to much prominence in every field of cosmetic activity. It is a good solvent for the bromo acid in the stick and helps in the permanence of the stain. However, one must use this product with discretion never exceeding five per cent. of the total base, or else the desired "cetyl effect" will be replaced by a tendency to dryness. Cetyl alcohol upon exposure to air and moisture becomes rancid with age, owing to its oxidation to the aldehyde and acid stages.

Cocoa butter is another substance employed in lipsticks because it is very soothing to the skin, and because it melts at body temperature. But like the other components it possesses certain bad features, that is an odor which is difficult to disguise, and a tendency to turn white and flake upon exposure to air. A product with the same ungent qualities as cocoa butter can be prepared by using an absorption base with a proper stiffening agent, such as carnauba wax or ozokerite. Hydrogenated cocoa butter may be used. This substance is free from the ordinary cocoa butter odor, yet it has most of the good properties of the regular butter.

Hydrogenated oils have been used in lipsticks with some success, but are difficult to obtain. As these under certain conditions also become rancid, no apparent gain is realized from their use in my opinion.

Undoubtedly a lipstick may be assembled by throwing together materials according to some convenient formula, but a good lipstick can be achieved only by a thorough understanding of the nature of the substances and the chemical reactions of the various ingredients comprising it. For this reason I have been especially concerned in this article with the chemical problems of the stick rather than with laboratory technique. In discussing so extensively the properties and action of certain materials, I have tried to make available some general information obtained from many months of experimenting in the laboratories to construct a lipstick fresh and vivid in color, non-injurious to the skin, permanent in stain and non-drying to the lips.

DRYING CLOVES IN THE SUN

SOURCES OF CLOVES

By Gert Keller*

Although cloves and Zanzibar are very intimately connected and one is inclined to think of the one in connection with the other, it is not so very long since the clove was first introduced in Zanzibar, and in the nearby sister island of Pemba. About 1818, the Arabs first planted the seed which they had brought, some say, from Réunion, others from Mauritius. But credit for developing cultivation of cloves clearly goes to Seyyid Said, then Sultan of Zanzibar, who, when he saw the trees grown from the original seeds apparently appreciated fully the possibilities of clove raising and set out to develop it in a most lavish manner. Under his direction systematic cultivation was undertaken and soon great clove plantations spread out over the two islands under the toiling hands of slaves. Without the cheap and plentiful man-power obtainable by the use of slaves it is doubtful that these plantations could ever have been developed.

The cultivation was thoroughly successful in both islands and brought huge profits to this country, already famous for the ivory trade through which it had become rich. But in 1872 a terrific hurricane swept Zanzibar and destroyed almost all its trees. The year of the hurricane is a date people in Zanzibar reckon by, such as the Chicago fire or the San Francisco earthquake. Strangely enough, Pemba, only 25 miles northeast, escaped serious damage.

In the years following the hurricane, Pemba profited handsomely by the demand for its cloves which its neighbor could no longer help supply. But Zanzibar was not discouraged, and again the many thousands of slaves owned by the Arabs were put to work and new plantations were laid out. The renewed activity in Zanzibar led to increased cultivation in Pemba by force of example, with the result that the production of both islands increased from 80,000 frasilas† in 1872/3 to 413,000 frasilas in 1895/6, a remarkable recovery.

The young clove seedling is excessively delicate and should be protected by "cover crops." In setting out the plantations originally, casava was used mostly, the root at the same time being used as the basic food of the negro slaves' diet. Where casava was not used, artificial shades constructed of palm leaves, grass, and bamboo were erected. The soil around the seedlings needed plentiful ventilation, and most important of all, much water. So much individual attention for each of the

*Schimmel & Co., Inc.
†1 frasila: 35 pounds.

thousands of seedlings the first planters set out, meant labor on a scale present shamba owners could scarcely contemplate.

The raising of seedlings is a delicate operation and is not left to chance. The self-sown seedling is taken from the parent soil and set in prepared ground which has to be kept well watered, and where the plant remains for about a year. It is then ready for resetting in the plantation proper, the transfer taking place only during the coolest part of the year and when the most moisture is available. This period in the seedling's growth is one of great fragility and the transfer must be made with great care. The tap root must at all costs be protected from exposure or the whole year's patience and attention will go for nothing. As the young plant demands abundant moisture, the watering costs amount to three quarters of the total expense of nursing seedlings,—this in spite of the very modest wage the native laborer receives even today.

If the young tree receives proper attention after its transplantation it will come into bearing in its fifth year. Careful attention is, however, not a specialty in all of the plantations, in which case it is often not until its tenth year or more that the young tree will produce a crop. As to the tree's length of life, as far as crop-bearing is concerned, the general average is judged to be about sixty years, although there are a great many trees on both islands which are undoubtedly considerably older and are still in their prime. Owing to the absence of records until within the last few years, it is only possible to determine the exact age of the more recently planted trees, while the age of the older ones can only be guessed, or reckoned from the unreliable data supplied by old natives.

The clove tree is a spreading evergreen of medium size, known in botanical terminology as "Jambosa Caryophyllus" (Spreng), of the Murtaceae family. In Pemba the trees reach a height of from 50 to 60 feet, while in Zanzibar the largest are usually little over 40 feet, the difference being partly accounted for by the fact that in Zanzibar the trees only date back to the years after the hurricane. The crown of the clove tree is conical at first, becoming rounded in time, and the foliage is very dense, extending almost to the ground. The soil in which it grows must be well-drained and sandy, yet moisture retaining as well. Having a shallow root system which rarely descends more than 15 inches and which covers a radius of approximately 15 feet, the clove tree is very susceptible to drought and the seedlings must be constantly watched to see that they obtain the proper amount of moisture.

The cloves themselves are actually the flower buds which grow in little clusters all over the tree. They are at the beginning of a tender, somewhat rusty shade of pink, later turning green. They first appear during January or February and turn from green to red about July, at which time they are ready for picking, which continues until the end of January. There are two crops a year, the first from July until the end of October, called the "Maka" crop, and the less valued "Mouli" crop following after a four weeks' interval. The quality of the crop depends almost entirely upon the rainfall. The Southwest Monsoon blows up in March, bringing heavy rains from the end of March to the end of May, during which brief interval half of the year's entire rainfall drenches the little island. As far as the clove plantations are concerned, everything depends upon the Monsoon. If too much rain falls, the result may be disastrous, while too little is equally dangerous to the cloves. From October until December is a lesser rainy season, but not to be compared with the main Monsoon.

The cloves are picked exclusively by hand by native pickers who swarm up the trees, and who must know exactly which clusters to pick and which to leave for further ripening. An inexperienced picker who takes the unripened buds and who is not careful about snapping the cluster off at its base but breaks the twigs, can cost his employer dearly by damage to the following crop.

Immediately after picking, workers separate the buds from the stems by pressing the whole cluster against the palm of the hand. The separated buds are then dried in the sun on mats spread over the ground or on a cement platform, called a "sakafu." If the cloves are damp from rain they are at first left in heaps for five or six days and only then exposed to the sun. The stems are all piled together in great heaps and left until the whole harvest is in, when they in turn are spread on mats and dried and later marketed as well, although their value is considerably less than that of the buds. In drying, cloves lose on an average a third of their original weight. After drying they are packed in bags containing about 200 pounds each, and marketed by auction. This daily clove auction is, by the way, one of the most interesting and colorful spectacles a visitor in Zanzibar may see, and is not to be missed.

The buyers, who are mostly Indian merchants, grade the cloves and repack them for export in the mats, or "gonjes," so familiar to clove importers in all parts of the world.

It is very difficult to estimate the average yield per tree as this is not only determined by the age, size, condition, and situation of the tree itself, but also depends on the supply of labor available. Moreover, some trees are more difficult than others to pick because of their form. Particularly in Pemba there are many old trees with high crowns and few lower side branches. These are very awkward for picking and usually a considerable portion of the crop is left on such trees. Other trees are very difficult to pick because of a species of big ants (maji ya moto ants) whose homes are in the trees and who attack the intruding pickers in such numbers that the natives refuse to even attempt to pick in the more infested parts of the trees.

The average yield of a good tree in a favorable locality during a fairly good clove year would be from 1 to perhaps even 2 frasilas (1 frasila: 35 pounds) while the average for one of the poorer trees the same year would

be a fifth or less of this amount. The year of 1928/9 brought the poorest crop in 15 years, the trees averaging scarcely 1 pound per tree. The 1923 records of the Customs and Agricultural Commission estimate an average of 6 pounds per tree in Zanzibar and 7 pounds in Pemba for that year. The Government Plantations compute their average annual output at roughly 2½ pounds in fair years. However, 5 pounds per tree would probably be a safe guess as the yearly average, taking varying crops and years into consideration.

The size of the crops vary in cycles, according to many plantation owners. A bumper crop is expected as a rule every three years. Statistics compiled by the government confirm the fact that a good crop apparently does seem to occur once with every 2 1/3 years and a poor crop once in 2⅝ years, whereas a medium crop may be expected once within 5¼ years. These statistics can not of course be regarded as absolutely dependable, due to the short period in which figures have been available.

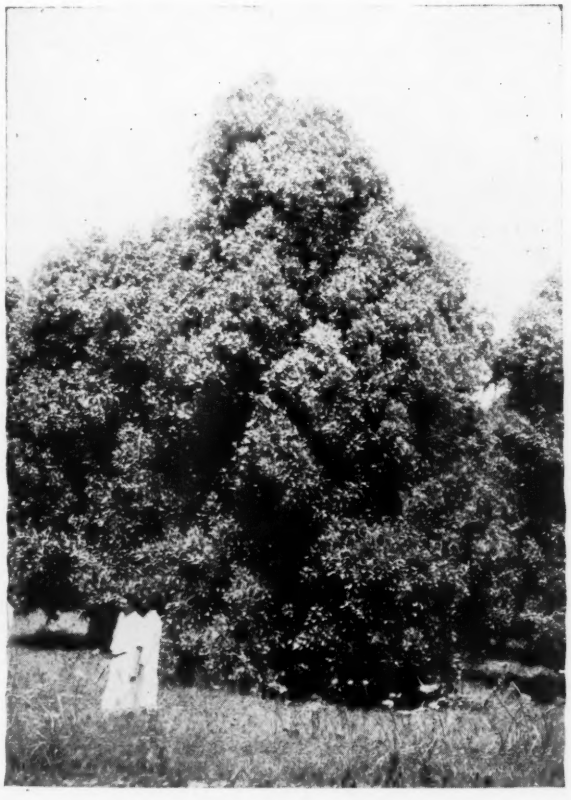
The following returns from one particular shamba show clearly the risks and uncertainty connected with the clove industry.

No. of Trees	*Year*	*Entire Crop*	
1400	1929/30	900	frasilas
"	1930/31	5	" (Reasons: poor year and inexperienced pickers).
2500	1931/32	600	" (Plantation extended, almost doubled).

PICKING CLOVES IN ZANZIBAR

No. of Trees	*Year*	*Entire Crop*
2500	1932/33	50 frasilas
"	1933/34	600 "

Approximately 250 frasilas of stems are estimated to 1000 frasilas of cloves.



A TYPICAL CLOVE TREE IN ZANZIBAR

The picking is done by natives who are paid by piece work, the measure being made according to "piskis," which contain approximately 2¾ pounds each. A good picker averages about 15 piskis per day, his pay being 1 anna per piski. The shamba proprietor, however, supplies these workers with a place on his plantation where they may build their primitive huts of palm leaves, bamboo, and grass, and he also supplies them with the few necessities for living. The workers move out with their whole families and remain for the duration of the picking season.

The supply of labor is anything but sufficient and the shortage of pickers is causing clove growers gravest difficulties, to such an extent that a considerable part of the crop is usually left on the trees. As a result of this shortage the wage demanded by the pickers is increasingly high, in proportion to the value of the crops, and although it can be covered when market prices are also high, it causes actual loss to the owner when prices are low. This is one of the reasons so many of the clove raisers have incurred debts or are heavily mortgaged. The Indian money-lenders have taken advantage of this state of affairs.

Most blame for the unsatisfactory situation lies, however, with the proprietors (mostly Arabs) of most of the bigger shambas. They carry on a constant warfare of hiring pickers away from each other at increased pay, ignoring entirely the fact that the returns cannot possibly justify such wages. The government attempted to remedy this suicidal practice by fixing the price of pickers at a meeting arranged between all the owners, but although the agreement was made unanimously, no one abided by it for a moment, and thus nothing was gained. The situation is even worse in Pemba which is forced to draw on Zanzibar for pickers.

In the early days the plantations were few and very large, owned by wealthy Arabs and worked by their slaves. In the course of a few generations, due partly to the Mohammedan law of division of property among inheritors and also to the abolition of slavery, these big holdings were gradually divided and subdivided into smaller plantations. The Arab owners have found it difficult to adjust themselves to changes or to conform to modern estate management and, as mentioned before, have fallen fairly generally into the power of the Indian money-lenders. The Indian already had the clove merchanting and exporting in his hands, and this additional speculative element gave his native gambling instinct even wider scope. In consequence, the Indian influence gained enormously, fortunes were made and lost, and a sort of financial aristocracy developed. Today, with Zanzibar as its keyhold, Indian influence has spread all over the eastern shores of Africa.

The Indian money-lender has no taste for working plantations himself, however, and so the process of subdivision continues and more and more small plantations pass into the hands of natives. There are still, nevertheless, a few large flourishing shambas which are owned and operated by Arabs, the success and prosperous condition of which prove that with proper management larger holdings are still practicable. In general, however, the smaller plantations prove more economical to run, the work in such cases being largely done by the native owner and his family, thus abolishing the difficulties of labor shortage.

Clove plantations in Zanzibar cover 16,000 acres (4% of the total area of the island), and 32,000 acres in Pemba (15% of the island). The total number of trees on both islands is estimated at about 3,500,000.

A government survey of both islands made some years back brought to light some interesting figures on the plantations and their owners, indicating to what an extent native owners are operating plantations, and how much more intensively the Arab-owned shambas are cultivated. The word natives is used to refer to non-Arab Africans.

	Arabs	*Natives*	*Total*
Number of owners	4,191	13,557	17,748
Number of plantations	8,688	22,187	30,875
Number of trees	1,623,813	1,133,197	2,757,010
Average trees per shamba	187	51	89

The annual production of cloves in the Zanzibar Protectorate averages about 9,500 tons annually, of which approximately 2/3 or some 6,500 tons originate from Pemba. The world's annual consumption of cloves is estimated at about 12,000 tons. Zanzibar and Pemba provide, therefore, roughly 83% of the cloves consumed by the world.

Among the competitors to Zanzibar in clove raising, the Dutch East Indies and Malaya (Penang) maybe dismissed because of their small output, even though their cloves usually sell at slightly better prices. Madagascar, however, offers more real competition, and is steadily increasing its output. Planting began in Madagascar about 1870 and cultivation expanded so rapidly that the clove acreage there is now estimated at 40,000 acres, only 8,000 acres less than the combined clove acreage of Pemba and Zanzibar. The actual output, however, is considerably less than the amount of land under cultivation would indicate. The Madagascar plantations are in more or less constant danger of damage by cyclones, even though they are set only in the most sheltered situations. Zanzibar and Pemba are fortunate in that they are off the beaten track of cyclones and are seldom swept by any gales so furious as those which endanger the Madagascar clove plantations. Costs of production are also much higher in Madagascar and as the plantations are far more isolated than in the compact little island of Zanzibar, transport is difficult and expensive. The great advantage which Madagascar boasts is the lack of rainfall during the harvesting season (October through December) whereas Zanzibar's November rains at times make it so difficult to complete the drying that the crop is imperiled. In spite of this one condition favoring Madagascar growers, the disadvantages are such that even the French authorities themselves more or less agree that the Madagascar output will most probably never exceed 3,000 tons annually, therefore not gravely menacing Zanzibar's vital industry.

Burns

(*Continued from page 276*)

Because of their occlusive nature, ointments and salves and oils are the most favored types of vehicles for carrying medicaments for the treatment of burns of minor degree. In the more severe burns, liquids and powders are used. In addition to tannic and picric acid and various patented antiseptics and local anesthetics, the medicaments chiefly used for burn preparations include olive oil, cod liver oil, vaseline, lead carbonate, boric acid, ichthyol, bismuth subnitrate, bismuth subgallate, thymol iodide, iodoform, sodium bicarbonate, resorcinol, zinc oxide, acetanilid, paraffin, potassium permanganate, ferric chloride, aluminum acetate, lead subacetate, alum, and calamine.

FEVER SORES

Effective remedies for this common disorder are always in demand. Ingredients and methods of manufacture are given.

An amazing number of people are afflicted with fever sores (*herpes labialis*) or cold sores as they are frequently known. Although the condition occurs most frequently in winter, it cannot be said to be a seasonal affliction because, in addition to being a concomitant symptom of colds, fever and exposure to wind and severe weather, it is also caused by sunburn, by nervous, digestive, and menstrual disorders and infections of the teeth, tonsils or sinuses.

The affection is characterized by acute inflammation of the skin and the formation of closely grouped blisters, yellow in color usually, which gradually dry up, forming a hard scale. The condition is preceded usually by a drying of the lips and a sensation of burning and it may run a course of ten days or two weeks. Although occurring most frequently on the lips, cold sores frequently appear also at the base of the nose, in the mouth, about the eyes, on the chin and very rarely on other parts of the face. Not infrequently one batch of sores is followed by a succession of them which continues all winter. Sometimes more serious conditions result, as when the vessicles become infected.

Hence the treatment should guard against infection; it should allay the pain and burning sensation; it should dry up the blisters. Most effective results are obtained with a product which is astringent, anaesthetic and antiseptic. It has been observed that cold sores can be prevented from becoming acute by promptly applying astringent lotions such as spirit of camphor, a two per cent solution of zinc sulphate, a three per cent solution of tannic acid or a ten per cent solution of alum. But invariably the early manifestation is regarded as a pimple and little attention is paid to it until it has taken hold,—a situation which may occur within twenty-four hours.

In spite of the frequency of the affliction no firm has yet successfully capitalized on it. This may be due to the fact that too many people are aware that a little spirit of camphor or a lump of alum provides the stitch in time, or it may be that no company has yet given dramatic point to a disease which is so very common. What probably is happening is that people have become accustomed to going to the local drug store to "get something" for a cold sore and that "something" is usually camphor or alum. This condition need not necessarily destroy the marketability of a good, trademarked product as the success of chest rubs over homemade mustard plasters testifys.

It will be necessary, however, to get hold of a good copy hook before attempting to market a cold sore product. One might play up the twin bugaboo of unsightliness and the danger of streptoccucus infection, or on the other hand an appeal to the aesthetic sense might go over. Certainly such an approach should appeal to women who might be persuaded to use a product designed to prevent or to check cold sores at their inception.

Small bottles containing astringent solutions and equipped with glass rods or camel's hair brushes would provide appealing containers. Ointments are less successful than either lotions or sticks because persons afflicted with the sores do not like to make them more conspicuous than they already are by applying a white or greasy ointment particularly in the day time. Colorless lipsticks containing the necessary ingredients seem gradually to be taking hold. These may be made as follows:

No. 1.

White beeswax	31. %
Cocoa butter	19. "
Lanolin	5. "
Menthol	.5 "
Thymol	.1 "
Camphor	3. "
Petrolatum, soft, white short fibre	41.4 "

No. 2.

White beeswax	30.0%
Paraffin	2. "
Petrolatum, soft white	49.8 "
Cocoa butter	8. "
Benzocaine	1. "
Lanolin	5. "
Camphor	2. "
Phenol	.2 "
Chloroform	2. "

Procedure: Dissolve benzocaine in chloroform. Melt waxes and fats and add camphor and phenol. Finally stir in the benzocaine.

Ointments for application at night may be made thus:

(*Continued on page 287*)

BANDITS AND ANISEED

Higher prices for aniseed oil are the result of the flourishing bandit organizations in China.

The spot market advance of 5c per pound in the price of aniseed oil is said to be directly traceable to bandit activity in China. When we say bandit activity we mean it more or less literally because many of the provincial governments in that unhappy country cannot be classified otherwise. The very instability of these local ruling factions, however, may result in defeat of present efforts to exact a tribute from those legitimate consumers of aniseed oil who, for the time being at least, will have to pay tribute to the lawlessness prevalent in many sections of the Orient.

Aniseed oil is distilled from the dried ripe fruit of Pimpinella anisum, L., or from the dried ripe fruit of Illicium verum, Hooker. The botanical source from which the oil is derived must be stated on the label. The anise plant is now cultivated in almost all parts of the world and to a large extent in Russia, but as we are not aware of any recent offerings of anise oil from Russia, it may be concluded that production there does not exceed the home consumption. The commercial supplies entering the United States are for the most part of Chinese origin.

Aniseed oil is produced in the western part of Kwangsi Province from Illicium verum, which grows to a height of from 25 to 45 feet. It is cultivated by the natives on hillsides on both sides of the Tonkin China frontier. The tree flowers twice a year, in February and June, the fruit, from which the essential oil is extracted ripening about two months later. Harvests, therefore, occur in April and August, the latter being the principal collection period. The anise tree does not begin to bloom and bear fruit until the seventh or eighth year and full production is not reached until the tenth year.

Authorities estimate that a tree 20 years old will produce from 90 to 110 pounds of fruit a year and estimates of oil yields vary from 1.6 to 3 per cent by weight.

After the cargo of aniseed oil is gathered in Nanning it is forwarded on the Sikiang (West) River to Wuchow which is situated on the border of Kwangsi and Kwangtung Provinces. The Hongkong merchants purchase the oil from Wuchow and it comes to them down the Sikiang River via Canton.

Although fighting had recently taken place in the northeastern part of Kwangsi this did not affect the producing centers for aniseed oil. This business would have gone on smoothly had it not been for the interference of the Kwangsi Provincial Government, which recently established a monopoly office in Wuchow, beginning its activities from the first of this year.

The monopoly office has for the present fixed for aniseed oil a price 20 per cent higher than the last market quotations. All of this oil must be delivered to the monopoly office in Wuchow against a receipt from the officials. It is then sent to Hongkong and when cash has been realized and received back at Wuchow it is paid to the suppliers less a 5 per cent. commission for the monopoly office.

Before anyone gets particularly excited about the possibility of further sharp advances in this oil because of developments in the primary market, it should be pointed out that stronger governments than exist in China have tried monopolizing the supply of various raw materials and have met with little success. It does not seem likely, therefore, that an unstable government or one based primarily on force can exercise a permanent influence over the varied factors that enter the picture when a monopoly is attempted. This is especially true when the producers are not in sympathy with the movement.

Certain forces are already at work to defeat the latest attempt at monopoly. Since this arrangement has been in force no one has delivered any aniseed oil to the monopoly office as confidence in this organization is completely lacking, hence business has come to a standstill. The Nanning Chamber of Commerce has also strongly protested against this monopoly, the continued inforcement of which would materially affect this business.

It is further reported from China that it is expected that the native suppliers will undoubtedly develop some illicit method of bringing this oil from Kwangsi to Hongkong, particularly since it is thought that the Government of Kwangtung, which as mentioned above borders Kwangsi, may be pleased to see the business come through their port, Pakhoi, in order to obtain the export duty. The information would indicate that it is scarcely probable that the present market situation created by the above will long endure.

Latest reports indicate that smuggling operations have already been resorted to in an effort to defeat the rulings of the monopoly office. Aniseed oil dealers in Nanning obtained from the Kwangsi Government permission to execute their pending contracts on January 5th, without having to deliver their oil to the Wuchow monopoly office on that day. It appears that the dealers took advantage of the grace allowed on that day to forward to Hongkong not only the cargo contracted for prior to the monopoly enforcement, but some 150 drums more which are now in the Hongkong market awaiting disposal from the Nanning dealers. So far, the dealers have maintained their price of $122 per picul, but as there has been no business at this figure it is possible that they will sell in the near future at cheaper prices.

At any rate, the possibility of interference with the general routine business in aniseed oil has been sufficient to warrant importers and dealers protecting themselves against eventualities to the extent that the New York market is higher at from 47c to 50c per pound as to quantity.

Skin Fatigue

(Continued from page 278)

With this knowledge of pain it is interesting to note the conclusion reached by one worker on the sensory activity of the skin. "The punctuate distribution of sensitive spots found at a single examination is explained by the view that in the skin there is a constant coming and going of activity of the different parts. Other examples of fluctuation are afforded by the skin in normal and in certain abnormal conditions, and the same principle may form the explanation of the variation found in areas of hyperesthesia and anesthesia." From this, sleep could reduce the skin sensitivity by decreasing the sensitive spots, and, vice versa, fatigue would increase the sensitive spots.

In conclusion, attempt has been made to explain the relation between skin fatigue and skin sensitivity in the more general relation of sleep to pain. That the relation exists can be established by every individual's own experience; the explanation is another problem. One third of life is spent in sleep and this fraction of life may be looked upon as the vitally important readjustment of the body mechanisms. Any infringement upon this time results in nature's first warning pain. The true saying, "Sleep is a generous robber, giving back in strength what it takes in time" could be truer if we added "and pilfers away a pain."

Fever Sores

(Continued from page 285)

Tincture of benzoin	20%
Balsam of peru	10 "
Cold Cream	70 "

Procedure: Heat the cream. Stir in the benzoin and the balsam. Stir until smooth and uniform in color.

or:

Benzocaine	3%
Compound tincture benzoin	20 "
Balsam peru	10 "
Cold cream	61 "
Chloroform	6 "

Procedure: Dissolve benzocaine in chloroform. Heat cream and mix in benzoin and balsam. Add benzocaine.

The first ointment is very soothing, the latter is also anesthetic as well. If it is too soft a small amount of paraffin can be added.

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A sturdy, efficient, speedy and economically operated filling machine with a capacity of 30 to 50 containers per minute.

Designed for handling of semi-liquids and semi-solids like Ointments, Salves, Cold Creams, Vanishing Creams, Emulsions, Heavy Oils, Lotions, etc.

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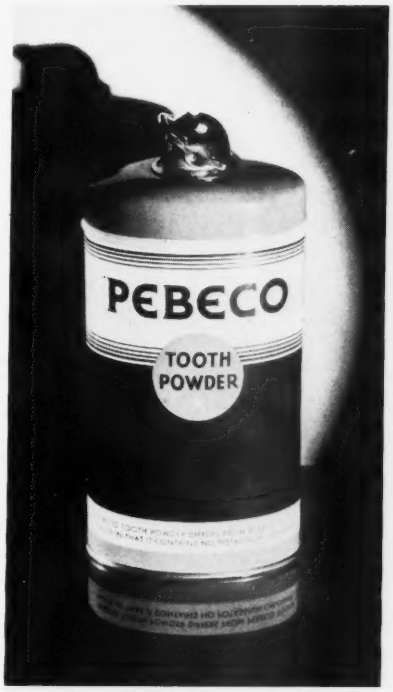
PACKAGING NOTES

Edited by Elmer Sheets

Best Packages

By this time most of you have probably heard that the Hoffman Club Soda bottle was judged the best package of the year in the contest held annually by the American Management Association in connection with the Packaging Exposition. But there are a number of things concerning the contest and, specifically, the part played by drug and cosmetic packages in the contest which you will want to know. In addition, you will want to see the drug and cosmetic packages which were entered so that you may judge for yourself of their relative merit in any packaging group and perhaps in comparison with your own packages.

In the first place, everyone is agreed that the packaging standards are noticeably higher, even in a year's time. In the second place, drug and cosmetic packages are better represented than they ever were before, with about 20 per cent. of the entries representing packages of this industry. At first glance, this seems very good, but we still feel that this is not adequate representation and that the manufacturers in this field are too modest concerning their packaging achievements. Despite some "horrible" examples, the general standards in this industry are higher than in any other single field and consequently, more of the prize winners should come from this group. But that will not be possible until many more of the best packages of the year make their appearance at these contests, for no matter how good the package, it obviously cannot win unless it is entered.



The only drug and cosmetic "winner" was Colgate's new tube which has been shown and commented upon in these pages before. Simon de Vaulchier designed it. While we are on the subject of tubes, we might add that aside from Colgate's entry of six of its new tubes, all of this same family. and an entry from Castilla of its tooth paste tube, there were no other entries from this industry, consumer of from 80 to 90 per cent. of all the tubes made, and seller of products packaged in innumerable handsomely lithographed and decorated tubes.

The justly famous Pebeco can was the only drug and cosmetic package to receive honorable mention. This can was made by Con-

(Continued on page 303)

MULTI-USE PACKAGING

By JOSEPHINE VON MIKLOS, Ph. D.

Giants and Nips, a new idea in packaging. Giants for the family medicine chest, nips for the vest pocket or bag. What an outlook on new possibilities for merchandising and advertising a product! The large bottles, the huge jars, the immense tubes for the habitual user contrasted with those tiny containers of the same merchandise which will fill the immediate need of of headache, a shiny nose, a sudden intestinal upset!

There are definite reasons why large quantities of certain drugs and, for that matter, cosmetics, are packaged and sold. It is, speaking for the customer, more convenient to buy a large quantity of something that is constantly used in a household than to have to run out every once in a short while to replenish the supply (in addition to which we all know that the supply usually will give out when we mostly need it). On the other hand, very small quantities for emergency uses are often sorely missed. If we feel a headache coming on, we usually have to put a few tablets of some medicine in our bag so that we may be safe against the strain of the oncoming rush of the day. Those tablets, rattling around loose are not going to improve the silk lining of our bag or vest pocket.

Packaging, in this case, has outgrown the problem of various sizes at various prices and has very definitely reached the point where it becomes a scientific problem of facts and figures, It is economical to produce and to buy a large quantity of, let us say, sodium bicarbonate; but should a temporary dyspeptic, if he needs one dose not be able to buy it at the corner drug store? There is a very interesting parallel to this problem in an entirely different field. Every camera enthusiast knows those marvels of technique and joy of every photographer, the Leica and Contax camera. They use spools of rollfilms with 36 exposures on each film. This idea was one of the revolutionizing developments of the modern

photographic industry. However it was soon seen that 36 exposures are sometimes too many. So a very ingenious device or attachment has been constructed with which it is possible to make just one exposure if a special film is needed or if a special photographic problem needs a different and specialized treatment.

All of which illustrates the point that we are trying to make in presenting the photographs on these pages. We have chosen an item that almost every modern human being uses at one time or another, aspirin. Aspirin is recommended for three distinct purposes, for headaches, for internal use for colds and for gargles. All these uses can be shown on one single package and we suggest the giant bottle for this application of our packaging idea. But as we have discussed in former issues, specialized packaging for each individual use has its great advantages. So we combine these two approaches and suggest, in addition to a giant bottle, tiny "nips" for each individual purpose, to be sold FOR a headache, FOR a sore throat or FOR a cold in the chest or in the head. Match-box-like containers would be a boon to customers and they could be so handy and good-looking that just carrying them around would make us feel a little better. And we could be kept pretty well supplied with them, in the main drawer of our office desk, in our dressing table, in our favorite bag. In other words, we feel, that instead of selling twenty-five aspirins or so in the ordinary kind of container, a manufacturer could sell two hundred and fifty or five hundred plus six and six and six and approach the customer from several different angles with the aid furnished by the packages themselves.

SELLING THREE SIZES

Just how is the proper size of a package arrived at? What factors determined the present size of successful medicines and cosmetics which have been on the market now for many years? Were they the profound results of scientific study of the product, the market, containers available and factory problems or do they represent simply the evolutionary development of an ancient apothecaries' convenience?

When we recommended study of the "drug nip"—a single or limited dose container—it was as a separate and distinct sales problem from the five and ten cent size and from standard sizes. Its proposed purpose was to assure the public a limited dose of a trade-marked product under conditions where the full size package is often not acceptable or available. Whether the drug retailer, dispensing physician, the hospital, pullman train or hotel is to act as distributor for these packages is an individual sales problem to be decided by each manufacturer for himself.

The trade reaction to this idea is far from unanimous. In some instances it is even uncomplimentary. What are we trying to do, we are asked, kill the business in large sizes when the trend is being carefully directed towards selling the large size? Do we want the public to buy on a dose-by-dose basis, put the retailer out of business and the drug manufacturer in the peanut business?

Now these are good old-fashioned arguments, used on many a stormy front, with slight variations, and because of their age they deserve respect. We have particular reverence for them because back in 1929 that was just about what we said of the 5 and 10 cent package.

But we heard none of these arguments used when manufacturers gave way to the 5 and 10 cent size. At that time, retailers were assured that a new market, a consumer-usage for which the public never even approached the neighborhood of the retailer was being reached. That far from injuring the retailer's business, it really helped him because the little package for the overnight trip, the cream and tooth paste on the guest room dresser was a grand sampling idea. And besides, the folks who had to buy at Woolworth's were an economic class the druggist wouldn't get anyway.

In other words, the manufacturer became convinced that he was missing a substantial market, a certain strata of the consuming public, defined and reached by the little package through this particular class of distributor. That this is a logical conclusion we firmly believe, even if we do not believe that it has always been handled to the best benefit of the manufacturer. That

it is the last chapter on packaging and price, reaching finally, every class of consumer and consumer need, we do not believe.

Markets, in the final analysis, must be the sole determining factor in package size. In a market as complex as America's one hundred and twenty or more million, analysis splits in many directions. It may be geographical by states; it may be by metropolis, small town, farm; it may follow income groups, or employment groups as farmer, factory hands, etc. For each of these groups, a logical and convincing line of reasoning would unquestionably follow any investigation to determine a package size for a specific medicinal product. For instance in the farm group we may find (1) a larger than average family (2) extreme seasonal exercise, (3) diet not balanced as well as urban dwellers (4) comparative isolation and inconvenience in reaching druggist and physician.

Certainly, whatever the results of such an investigation they would present a very different picture from a study of a typical mill or factory town. The logical conclusion to this line of reasoning would be to send every plant superintendent and sales manager to an asylum. It is suggested here only to point out and emphasize, as the 5 and 10 cent package has done, that every new package size or price size may so perfectly adapt itself to a market as to increase sales to that market.

Broadly speaking, from the viewpoint of the manufacturer of a household or standard medicine there are three classes of consumer need. There is first, the normal American family,—average size, average number of days sick, etc., all a matter of statistics. A scientific study of this family and its habits would probably justify the common household size package rather than the arbitrary use of a pint or a pound. Certainly this size, the household size, is the bulk of most manufacturer's business and without doubt it finds its way into the family medicine chest as it is meant to do.

The second market, and it is a very considerable one, represents the chronic or habitual user. In this case the demand may be for a staple product such as cod liver oil, mineral oil, milk of magnesia, etc.; or it may be for a prescribed medicine such as an ethical trade-marked tonic, anti-acid preparation, etc. Whatever the product, the necessity for continuous use creates an economic burden, a nuisance in repeated purchase and a growing desire to save money because of frequent purchases. Too many manufacturers of well-known brands are losing business in this market to the low price private brand because they have not met the demand for quantity at a fair reduction in price, from those compelled to use relatively large quantities.

The third market carries us back to our original contention that the one dose or limited dose package will create a great deal of business now lost. A considerable number of the American public are at this moment walking around with a slight headache, a touch of indigestion, a faint chill. They have no intention of going to the doctor; they don't even intend, most of them, to go to a druggist and buy a box, tin or bottle of the medicine they know they should take, and plan to take, when they get home to the medicine chest. That is, to say, if the headache, the chill or the indigestion hasn't worn off by that time. It's a better than fair guess to say that if manufacturers knew the number of business men, travelling salesmen, vacationists, etc. who let a minor ill pass because they won't buy again a product they know they have at home; or because they won't buy a package to throw away three-quarters full; or because they won't lug a large package around with them; there would be some tall whistling in the sales department. It's a good enough guess anyway to hope that some manufacturer, some day, starts educating the public not only to keep a package at home but to drop in for a dose at the druggist, when he needs it.

Probably few family medicine chests are adequately equipped. In large part they contain the remnants of the last few pains, aches and sicknesses. To get the average American family to practice preparedness with any of the present size packages is more than most sales and advertising managers would care to tackle. Yet it seems reasonable that the single dose package would

(Continued on page 313)

Gallons of mineral oil and cod liver oil, pounds of shaving creams, and two hundreds and five hundreds of aspirin tablets are some of the economy packages.

Vitamin products, originally believed efficacious only for various deficiency diseases, are now the first line of defense against many other human ailments. These products are marketed in practically all the various forms known to medicine, and therefore employ a rather full line of types of packages.

VITAMINS

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WITH COD LIVER OIL
MEAD'S
NEWFOUNDLAND COD LIVER OIL
SCOTT'S EMULSION
PATCH'S FLAVORED Cod Liver Oil
MEAD'S DEXTRI-MALTOSE WITH VITAMIN B
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As the photographs on this page show, there is practically no limit to the number of applications of Durez to drug packaging. Hundreds of drug manufacturers have redesigned packages and made use of the definite sales appeal of this modern material.

Durez molded pieces have a smooth, lustrous finish that will never dent, scratch or peel. Alcohol and most common chemicals will not affect Durez in any way. It is light in weight—reducing shipping costs—yet structurally strong.

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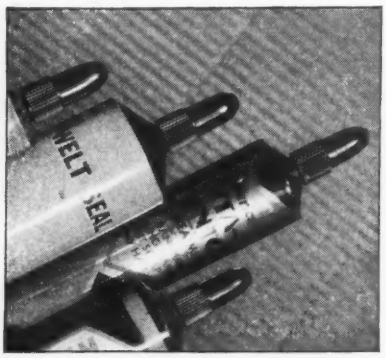
DUREZ

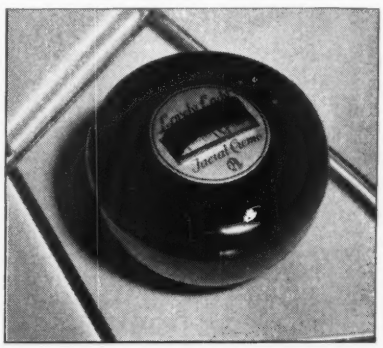
THE MODERN PACKAGING MATERIAL

COMPACTS—What better material for a compact than sleek, lustrous Durez? Its finish will never scratch, dent or peel. It's light in weight, pleasant to the touch. This one contains a generous portion of loose powder, and is almost as flat as a modern watch.

DE LUXE BOXES—Pleasing in design and with a definite quality appearance, this stock molded box is a permanent container. Women like the sleek finish that won't dull or chip. It would make an appealing package for a manicure set or cosmetic assortment.



APPLICATORS—These tubes of nasal cream have molded Durez applicator tops. Smooth and corrosion-proof, they make it easier and more pleasant to use the cream. Many types of molded Durez applicator caps are available. Their attractive appearance will dress up your package.



CREAM JARS—Durez molded jars are available in several shapes. They are rich in appearance, and the lids screw off and on with a mere flick of the fingers. Chemically inert Durez will not affect the contents. Durez jars have increased sales for many cream packers who have used them.

TABLET CONTAINER—Here's a new Drug package that's both convenient and practical. Each INDO-LACS has its own snug compartment in the molded Durez container . . . helping to prevent crumbling and breakage, and making it handy for the user. Do you make aspirin, indigestion tablets, etc.?

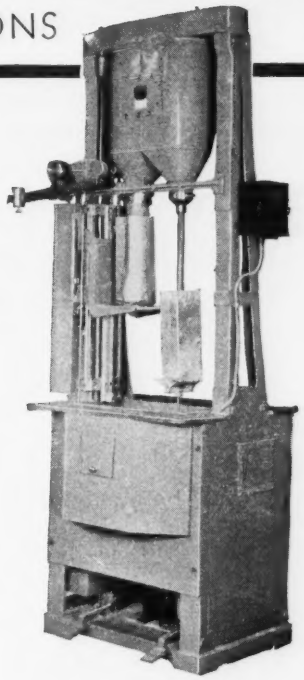
PACKAGE WITH PERMANENT USE—This Durez razor box will swing many a sale for the razor. Old-blade receptacle, new-blade package and the razor itself all fit into their neat niches. Soapy hands and wetting won't hurt it a bit. Other toilet articles can be packed the same way.

BOTTLE CLOSURES WITH PERSONALITY—The trade-name's Crown . . . so they made the closure one! Durez molded screw-caps can be made practically any shape to complement the design of your bottle or to tie up with your trade-name. Durez screw-caps always come off and go on easily, yet provide a tight seal.

FILLS, WEIGHS, PACKS 1/4 oz. to 25 lbs.

CANS · CANISTERS · BAGS · CARTONS

The S & S DUPLEX PACKER & WEIGHER is one of the most versatile fillers you have ever seen . . .



With speeds varying from five to eighty packages per minute, and with pressures up to 120 pounds, the S & S DUPLEX PACKER & WEIGHER can be equipped to operate in six different manners:

1. Pack at one station, weigh at the other.
2. Pack at both stations, by pressure.
3. Fill by gross weight at both stations.
4. Fill by volume at both stations.
5. Fill by volume at first station, dribble fill for weight at second.
6. Bulk and dribble fill, by weight, at both stations.

There are probably a number of money-saving uses for this unusual filler in your plant. Write and ask S & S Engineers how it can be fitted to your particular requirements.

Convenient Payment Terms Are Available

Designed Particularly For . . .

Flour, Meal, Cocoa, Arsenate of Lead *and other insecticides,* Paste, Powder, Chemicals, Powdered Milk, Lime, Fertilizers and many other materials.

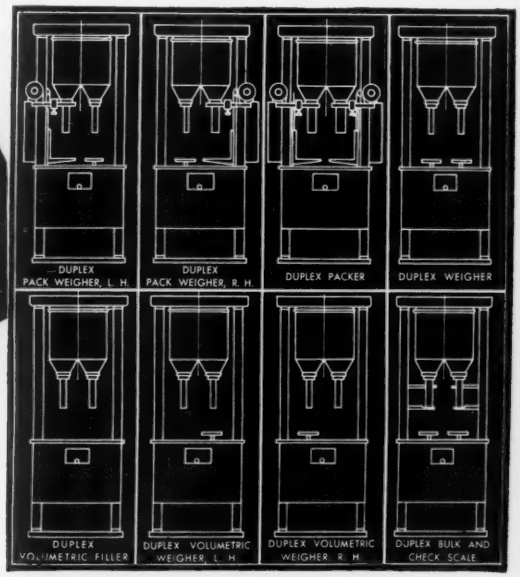
STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

4912 Summerdale Ave., Philadelphia, U. S. A.

British Office: 23, Goswell Road, London, E. C. 1

SEND FOR ILLUSTRATED FOLDER JUST ISSUED


DUPLEX PACK WEIGHER, L. H.
DUPLEX PACK WEIGHER, R. H.
DUPLEX PACKER
DUPLEX WEIGHER
DUPLEX VOLUMETRIC FILLER
DUPLEX VOLUMETRIC WEIGHER, L. H.
DUPLEX VOLUMETRIC WEIGHER, R. H.
DUPLEX BULK AND CHECK SCALE

WHERE someone's sick or indisposed, there you will find an array of glass packaged aids to health . . . drugs, ethicals, pharmaceuticals, remedies. From simple cough syrup, laxative or antiseptic to highly or extremely potent medicinal preparations, each and every one needs the right kind of protective seal to preserve intact its purity and curative qualities. The Anchor Molded Cap provides such a seal and at the same time the severe but rich simplicity of line and material that appropriately beautifies and dignifies the appearance of the package. Let the external appearance of your packages bespeak the care you take in safeguarding their purity and quality.
Anchor Cap & Closure Corporation
LONG ISLAND CITY, N. Y. TORONTO, CAN.
ATLANTA • BALTIMORE • BOSTON • CHICAGO
CINCINNATI • CLEVELAND • DENVER • DETROIT
HOUSTON • LOS ANGELES • LOUISVILLE
MONTREAL • NEW YORK • PHILADELPHIA
PITTSBURGH • ROCHESTER • ST. LOUIS
SAN FRANCISCO • SEATTLE • TORONTO
ANCHOR-CAPSTAN
★ GLASS CONTAINERS ★ CLOSURES
★ SEALING EQUIPMENT
★ RESEARCH ★ PACKAGE DESIGN
5 STAR SERVICE
Anchor Molded Caps

GROVE REPACKAGES FOR SPEED

Here is an instance in which it was necessary to redesign packages so as to make them adaptable to use on automatic machinery. Only two lines of automatic machinery were available and all products had to be adapted to one or the other.

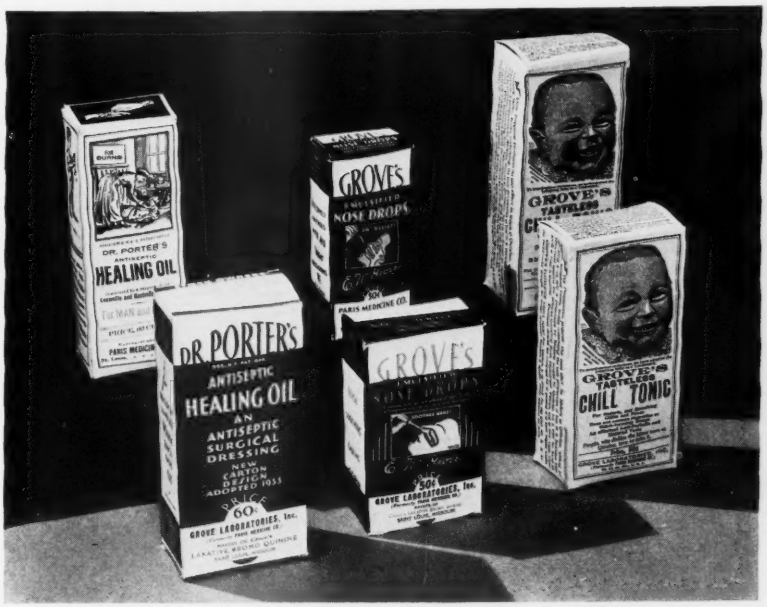
The story of the Grove re-packaging job is interesting because of the extreme care taken to insure that the new packages would conform to efficient production requirements. Originally the line consisted of about 10 items, all of which were different in size and shape, and hence, each required a special set-up of equipment when it had to be produced.

As a first step it was decided to divide all of the products into two groups each of which was to be packaged on a separate line of equipment. The Chill Tonic, Grove's Emulsified Nose Drops and medium size Doctor Porter's Healing Oil are packaged on one line. Small size Oil, Febriline, Baby Bowel and Pazo ointment are packaged on a second line.

Originally it had been the intention of the company to re-package all the items and to change designs quite radically. In the case of Chill Tonic, however, the company found after a field investigation that it could not be changed without risk of sales loss. As the item is sold in very considerable volume throughout the South, Mr. J. R. DeSaxe, who was in charge of the redesign program, made this investigation before deciding what if any should be the changes in the design of the package. He discovered that a large part of the output was consumed by illiterate Southern whites and negroes, to whom the product was identified, not by its name, but as "Baby Face Tonic in the orange box." So, perforce, the baby face remained as the most conspicuous, and, to the modernists a painful feature of the design.

Because of the fact that it was necessary to produce Grove's Chill Tonic, Emulsified Nose Drops, and medium sized Porter's Oil on one line, and since nothing radical could be done about changing the design of the Chill Tonic package, its two most important dimensions, the width and thickness were adopted also for the Emulsified Nose Drops and Healing Oil. The Healing Oil, moreover, is exactly similar in all three dimensions to the Chill Tonic package. Having the two important dimensions standardized the necessary change-overs of equipment are very much simplified.

Although the exterior appearance of the Chill Tonic package could not be altered, many changes, notwithstanding, were made in the contours of the bottle in order to make it a better production unit. The original bottle had the name embossed over the entire surface of the rear panel. The sides of the bottle were oval and there was a considerable overlay of the label along the edges. Inasmuch as the embossing impeded production, it was removed and placed about the neck, thus eliminating the need for placing the bottles on the intake



PACKAGES REDESIGNED FOR ONE AUTOMATIC LINE-UP

Just two OF SALEM'S EXTENSIVE TINCTURE LINE

THOUGH familiarly and traditionally known as Tincture Bottles, these practical containers are really misnamed. For they are suited to a great variety of drugs and pharmaceuticals—tinctures, extracts, fluid extracts, proprietaries—liquids of all kinds, in fact. Sizes range from 1/5 oz. capacity to 1 gallon, thirty-three in all; in either clear crystal or rich amber, with C.T. or cork finishes. Salem's three-quarters of a century reputation for making strong, clear, accurately finished glassware is your assurance of quality . . . and we should appreciate the opportunity of letting our service speak for itself. Samples and quotations based on your requirements will be gladly and promptly supplied on request.

SALEM GLASS WORKS

SALEM, NEW JERSEY

Associated with Capstan Glass Company, Connellsville, Pennsylvania

ATLANTA · BALTIMORE · BOSTON · CHICAGO · CINCINNATI · CLEVELAND
DENVER · DETROIT · HOUSTON · LOS ANGELES · LOUISVILLE · NEW YORK
PHILADELPHIA · PITTSBURGH · ROCHESTER · ST. LOUIS · SAN FRANCISCO · SEATTLE

conveyor in a certain way. Inasmuch as oval edges facilitate jamming when bottles push against each other, the sides were flattened out slightly to obviate this difficulty. Because labels that extend too far over the edges of a bottle are not especially easy to apply automatically, the width of the label was decreased.

Similar changes were made in the Nose Drop bottle. The original container possessed a double taper. The edges of the bottle tapered toward the heel and the panels tapered toward the shoulder. Bottles that taper toward the shoulder are always difficult to handle because the shoulders strike first and then, traction being on the bottom, they tend to spread fan-wise, causing jams. The taper of the panels was modified slightly and the proportions of the labels reduced so as to provide an eight inch tolerance all around to facilitate labeling.

The changes made on the other small packages were considerably more radical. Originally each item was different in size and shape. So as a first step an identical container was selected for Dr. Porter's Healing Oil (small size), Febriline, Baby Bowel Medicine, Grove's Worm Syrup. Caps were standardized and labels of similar dimensions were adopted. The adoption of a standard sized bottle made it possible to use a carton of identical dimensions for the four items and the standardization of dimensions made it possible to eliminate change-overs entirely.

When the line is shifted from one product to another, the labels are removed from the labeling machine and a new stack put in. The cartons and circulars in the cartoning machine are replaced with the required ones and the line is ready to turn out the new product. In a couple of minutes everything is ready to go.

This left the collapsible tube for Pazo Ointment which still had to be provided for. Inasmuch as it has to be cartoned it was decided to include it with the above mentioned group and its carton, too, is similar in dimensions to those used for Porter's Oil and other products. This permitted the cartoning of the item on the same machine which is used for the bottles.

Grove's experience again proves that standardization of packaging materials is one of the most direct ways of reducing costs. It speeds up production; it eliminates setting up time; it minimizes delays; it saves the cost of accessories; it effects economies in the manufacture or purchase of packaging materials.

In order to visualize the extent to which package re-design can correct old difficulties and effect very considerable savings, we shall review the necessary steps of an orderly, scientific procedure.

The first step is to simplify packaging materials as to colors and design. This means to reduce four and five colors printing jobs to one or two, the elimination of ornate embossing, etc.

The second step is to standardize as to materials and sizes as in the case of Grove Laboratories, cited above.

The third is to eliminate superfluous packaging materials. In some cases it is desirable to increase the amount of packaging materials employed, as for instance in cases where descriptive literature and samples are distributed with the product. But when packaging material elimination is possible and practical, it is obvious that there is a double saving, the first in material and the second in labor.

Having reached this stage when the package has been simplified, standardized and stripped as bare as possible it is necessary to go back over merchandising factors before the changes are finally made official. Packaging material cost as a rule require such a small part of the total cost, that it is folly to attempt to reduce it if by so doing impairs the appearance or character of the package to an extent which increases sales resistance. There are numerous instances where an increase in packaging material cost brings about a direct increase in sales. Since an increase in sales invariably results in an increased percentage of net profit (because the ratio of fixed overhead to sales decreases as the latter increases), it is obvious that it takes but a very slight rise in profit to offset essential increases in packaging material cost. Very often, indeed, it is easily possible to offset increases in packaging material cost by selecting materials and design features which will simplify and thereby reduce the cost of packaging operations. The slogan of every manufacturer should be: "A better package at no increase in cost." And if he uses his head, he can get it.

PACKAGES REDESIGNED FOR SECOND AUTOMATIC LINE-UP

THE SYMPHONY

A New Stock Design

● Here's an impressive new creation by Owens-Illinois designers—the Symphony Oval for hand lotions, toilet water, after-shaving preparations and similar products. Its graceful lines and curves —formed of clear, sparkling *Onlzed* glass—are blended in perfect harmony. A generous space is provided for your label. The twisted cord motif which decorates the sides permits a firm and easy grip when contents are being used. The Symphony toilet line will be made available in the more popular sizes. We will gladly suggest an effective closure and label treatment.

Modern and Graceful

OWENS-ILLINOIS GLASS COMPANY, TOLEDO, OHIO

OWENS-ILLINOIS

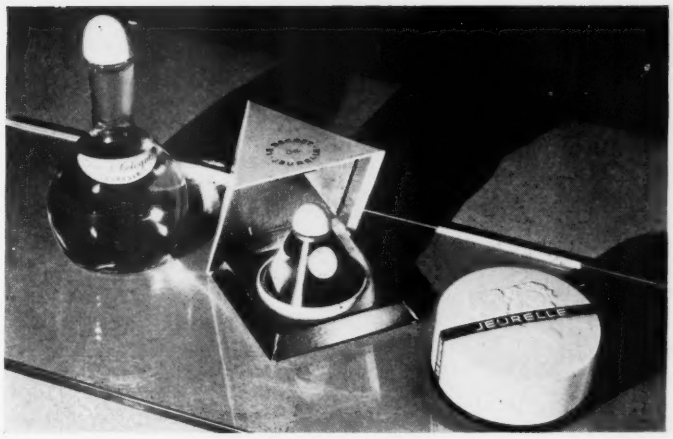
COMPLETE PACKAGING SERVICE

Best Packages

(Continued from page 289)

tinental Can as were the Roger & Gallet, Merck, and Golden Peacock cans which we show in the accompanying pictures. The Listerine tooth powder can was also outstanding. It was designed by J. H. Stevens and is also shown in our group picture of tin containers.

The outstanding package in the glass container group was the "Jeurelle" Eau de Cologne bottle, designed by de Vaulchier. Although the judges did not have the same high regard for it as we have, we still think its the best thing which has been done in glass. Other good glass container entries from this industry which we show are, another Jeurelle bottle, the Pacquin jar, the Irresistible bottle, the Amolin jar, the Velvette jar, the Velure bottle, and the Nyal Eau de Cologne bottle. All of these are unique and unusual packages. Velure is well designed with lovely pastel green and lavender colors doubling its attractiveness, while Vel-vette makes good use of a "squeegee" blue name on the jar harmonizing with the cap.



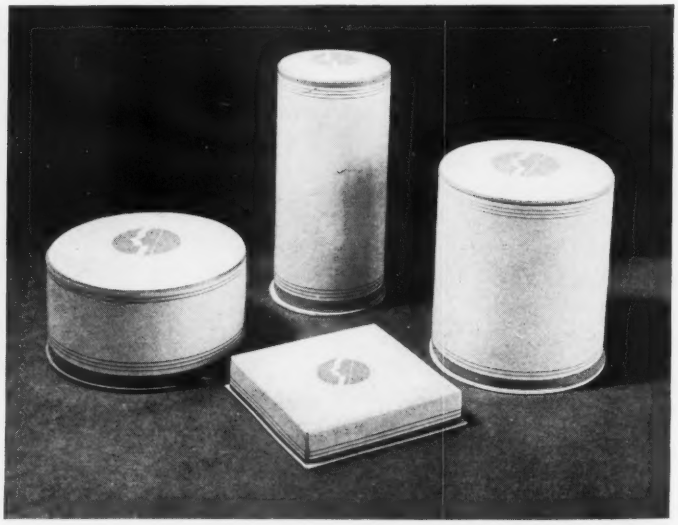
No other industry uses better looking cartons than the drug and cosmetic manufacturers as the examples we show here will testify. Although the general standard of this group is higher than any other carton group entered, no single member of the group impressed the judges as being superior to a Montgomery Ward spark plug carton, which was awarded the prize. Nevertheless, Nason, Kelpex, Zincora, Frostilla, Listerine, Colgate, McKesson, Abbott, Greiner, Amolin, Crookes, Pacquin, Winthrop, and Smaco, among others, deserve high praise for their cartons and for their enterprise in entering them.

The Jeurelle powder box was the only plastic container entered from this industry but we have a hunch that another year will have quite a different story to tell regarding the number of outstanding packages developed in this material and entered in the contest.

Probably the best looking set-up box from this industry entered in the show was the Triomphe box, which was entered in the family package classification, which we shall discuss later. Vita-Ray's dusting powder box of cork and copper was interesting, while Tre-Jur, George Button, Primrose House, and Irresistible were also represented. But this was another outstanding example of a

group in which proper representation is lamentably lacking. Think of the many lovely boxes in which cosmetic and perfume manufacturers have introduced their products during the past year and you, too, will wonder why a more representative group was not shown.

Which brings us to the family of packages. We show three of the drug groups; Merrell, Winthrop, and the S. M. A. Corp., all of which are fine packaging jobs. The Smaco packages are particularly attractive as a family group because of the varying pastel shades in which the box decorations are finished in order to make for quick identification of the particular product. Of the cosmetic family groups, the Triomphe box made by W. C. Ritchie for Valentine Laboratories is beautifully finished in harmonizing shades of brown and with the supported mirror inside; the Ward line is attractively designed as are all the Montgomery Ward packages; the Agnes Sorel line, made by Bridgeport Metal, is remarkable for its exquisite metal work and also for the fact

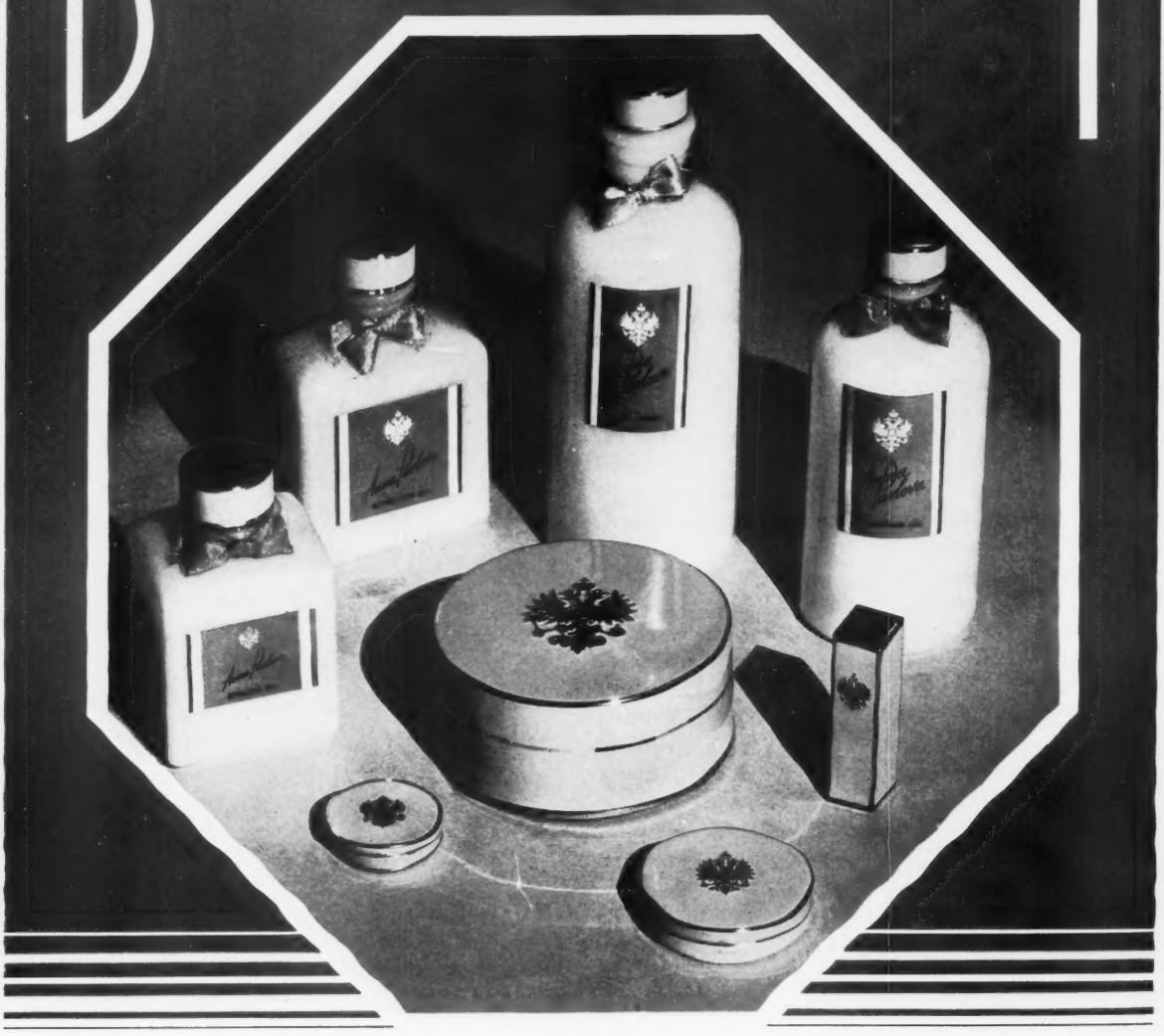


that it represented the only packages of this particular type in the contest—the many lovely metal containers used by cosmetic manufacturers are not otherwise represented; and the Krank line of packages is chiefly remarkable for the fact that Krank encloses everything, creams and lotions included, in lovely old rose and white set up boxes.

There were no outstanding entries in this year's competition for distinctive merit in technical packaging development. The only prize winner which bordered on the drug and cosmetic field was the "Westite" closure for collapsible tubes, entered by F. J. Stokes Machine Co. As most of you know what this is and as it has been explained at length in these pages before, we will not attempt a description of it here. Abbott had a pour-lip bottle entered, designed by E. A. Ravenscroft, which we thought was very ingenious and which we show here. We also liked the Aluminum Co.'s tamper-proof bottle seals for their simplicity and ease of use; Maternal Health Products' puff celluloid tube for a powder deodorant; and Hoffmann-La Roche's tape packaging of "Allonal;" among the contributions which were offered from and for this industry.

Generally speaking, it did not seem to us that the general level of the entries in this technical award competition was very high. There were many interesting devices and many clever gadgets entered but most of them were restricted in nature and made no great general contribution to packaging. But then, this was

BRIDGEPORT

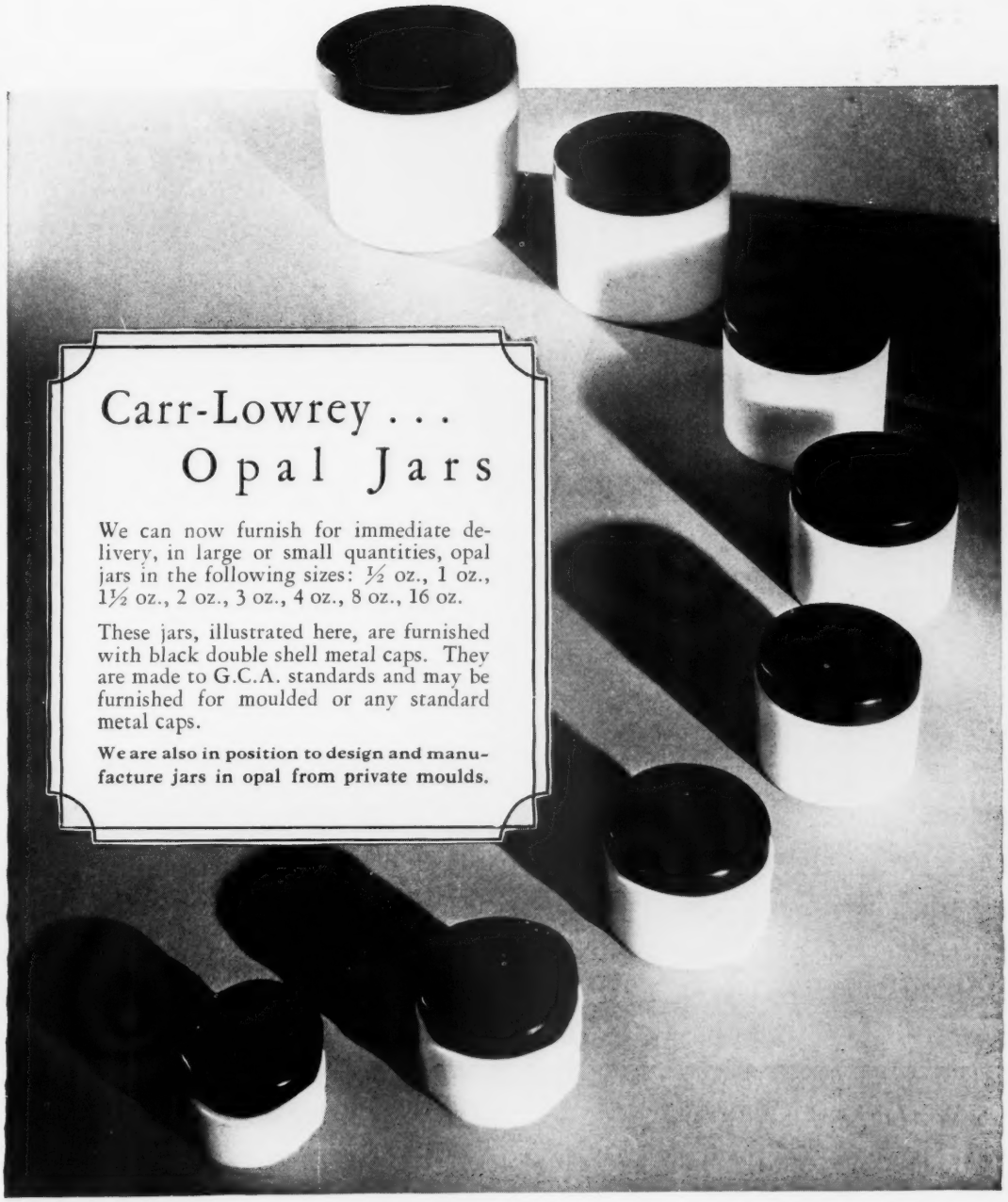


The smartest new cosmetic lines rely upon metal containers and metal covers to give their packages richness and charm. For distinction in metal containers, for the last word in beauty, design and utility, the smartest cosmetic manufacturers turn to Bridgeport Metal.

JAR CAPS
ROUGE CASES
POWDER BOX COVERS
EYEBROW PENCIL HOLDERS
METAL NOVELTIES TO ORDER

The BRIDGEPORT METAL GOODS MFG. CO.
BRIDGEPORT · CONNECTICUT
PHONE. BRIDGEPORT 3-3125
Est. 1909

BOTTLE CAPS
VANITY CASES
PASTE ROUGE CONTAINERS
LIPSTICK HOLDERS (ALL TYPES)

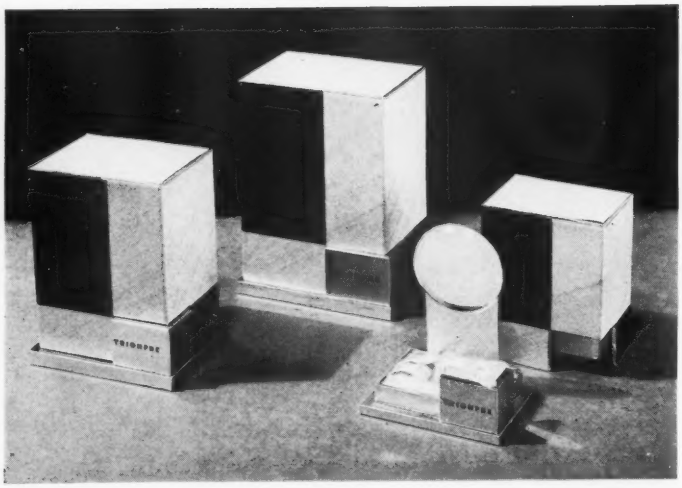

Carr-Lowrey . . .
Opal Jars
We can now furnish for immediate delivery, in large or small quantities, opal jars in the following sizes: ½ oz., 1 oz., 1½ oz., 2 oz., 3 oz., 4 oz., 8 oz., 16 oz.
These jars, illustrated here, are furnished with black double shell metal caps. They are made to G.C.A. standards and may be furnished for moulded or any standard metal caps.
We are also in position to design and manufacture jars in opal from private moulds.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD.

NEW YORK OFFICE: *500 FIFTH AVE., Room 1427*
Telephone: CHickering 4-0592

CHICAGO OFFICE: 1502 MERCHANDISE MART
Telephone: WHitehall 4326



the first year, and a good start was made. By the time another year rolls around it will be better understood just what this award is given for and we look forward to seeing more real contributions entered.

The jury of awards for Distinctive Merit in Technical Packaging Development consisted of Wm. M. Bristol, Jr., vice-president, Bristol-Myers Co.; James C. Lewis, secretary, E. R. Squibb & Sons; James Henry, manager, E. Pritchard, Inc.; A. B. Schell, production manager, The Hills Brothers Co.; Elmer Sheets, associate editor, THE DRUG & COSMETIC INDUSTRY; Alice Blinn, associate editor, *Ladies Home Journal;* and Dr. Stroud Jordan, Stroud Jordan Laboratories.

Members of the jury for Distinctive Merit in Packaging Design were Paul Hollister, executive vice-president, R. H. Macy & Co., Inc.; Prof. Ralph S. Alexander, School of Business, Columbia University; Miss Marion C. Taylor, merchandise editor, *Vogue;* Lucian Bernhard, artist; Miss Katherine Fisher, director, Good Housekeeping Institute; Miss Alice Hughes, feature writer, *New York American;* Frederick C. Kendall, editor and publisher, *Advertising and Selling;* Ray M. Schmitz, secretary of the carton and new products committee, General Foods Corp.; Richard F. Bach, director of Industrial Relations, Metropolitan Museum of Art.

This was the fourth of these contests held in connection with the Packaging Exposition. "Linit," manufactured by the Corn Products Refining Co., of New York, received the 1931 trophy for the best package, the second year's award was O'Cedar Wax Cream, and last year it went to the Great Atlantic & Pacific Tea Co. for their Red Circle Coffee bag.

PACKAGING QUESTIONS

This department welcomes correspondence from manufacturers with packaging problems. We shall be glad to cooperate to the best of our ability in answering any question relating to merchandising or packaging or in suggesting sources of supply.

MECHANICAL WRAPPING

Our product has been on the market for a considerable number of years in a rather distinctive container with which you are undoubtedly familiar. For several reasons we have decided to wrap our bottle and we would appreciate your opinion as to whether such an irregular shaped package can be wrapped automatically. New York.

(*Editor's note: this package is a vase shaped bottle.*)

The answer is no. There is no standard wrapping machine which would do a good job with a package like yours unless of course you were willing to put it into a carton. Ordinarily an oblong or rectangular package can be wrapped easily and special wrapping machines have been built for cylindrical containers and even for certain bottle shapes. That which determines the practicability of mechanical wrapping is the presence of two parallel lines opposite to each other. In your case the bottle has more curves than Mae West, in view of which mechanical wrapping is out unless you are willing to change the package or to use some form of carton. Bottle wrapping is a hard job especially when you expect to get a *neat* job. A bottle with a cylindrical body and a reasonably long neck can be wrapped but the neck fold cannot be made with the precision and neatness of hand wrapping.

PRIVATE MOLD OPAL JARS

We were very much interested in your comment on the Pacquin jar in "Packaging Notes." If we should decide to attempt to get away from the stock types of opal ware, just what would be the restrictions we should be prepared to face?

As the run on opal ware must be a large one due to manufacturing requirements, it is only the larger users of jars who can use enough to permit a private mold. In other words, in addition to the mold cost, there is the problem of having the need for an unusually large number of jars, all of which must be run at the same time due to the special manufacturing exigencies involved in making opal ware. This, in part, explains the fact that there are only two makers of opal jars and it would be well to discuss your problem with one of the two before giving further consideration to the possible use of a private mold jar for your own purposes. But we warn you, they talk in terms of thousand gross when it comes to a private mold, even though you can buy as few as a dozen on a stock mold.

DECORATING GLASS CONTAINERS

We are at present preparing to put out another line of medium priced cosmetics and perhaps a line of household drugs under the same name. As our other lines have made use of embossed and lithographed labels we are anxious to achieve a degree of diversification by using some other form of labeling if possible. We remember your discussing these things some time ago and we wonder if you would be good enough to indicate the other variations which are available to us? Cincinnati.

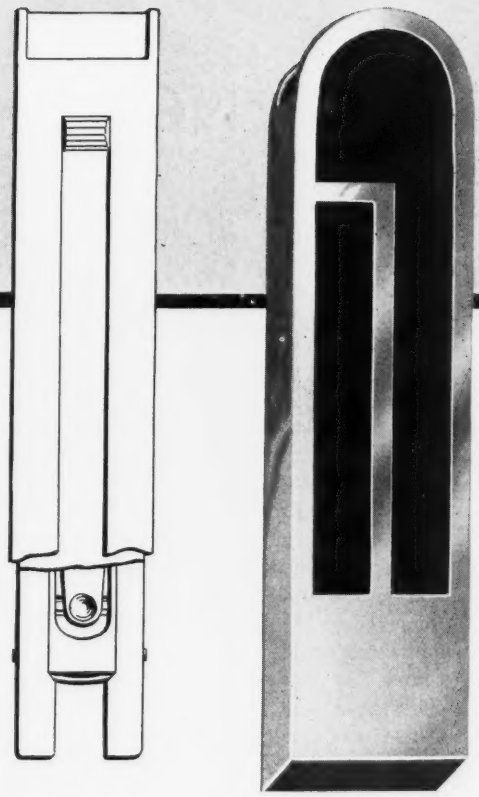
Aside from the paper and metal foil labels there are three types of decoration which you might adopt. In the first place, there is the fired-on decoration which is called the squeegee. Formerly this was restricted to fairly heavy line work, but progress has been rapid in recent years and you can now get considerable delicacy of line and (if you have a large run so that you can afford it) two or even three color decoration. However, a good looking decoration may be obtained in one color on even a modest-size run, although the cost is fairly high per unit. An alternative to this is the decalcomania, which is in reality a label, with such a fine, transparent background that it blends right into the bottle or jar. With the "decal" you can secure extreme detail and fineness of line, so much so, that it is suitable for direction statements. However, the labelling problem with a decalcomania is one which has yet to be solved with automatic equipment. Most of this work is at present done by hand, although there is a process available which puts it in the semi-automatic class. The third type of decoration which is possible has been recently developed and thus far, no drug or cosmetic manufacturer has made use of it. To all intents and purposes it consists of printing on glass, and with its use everything is possible, including halftone reproduction, three or four colors, and, in short, anything you can do on a printing press. This decoration is fairly expensive and, for the present, necessitates a large run. The first of the packages decorated by this process will probably appear on the market in about a month and we shall show it in these pages, the minute the manufacturer releases it.

IT'S A SUN TUBE

G. Washington put out one-cup services of their famous coffee in miniature Sun Tubes—christened them "Aces." And do they sell? They have scored a grand slam in coffee sales, says G. Washington.

SUN TUBE CORPORATION · HILLSIDE, N. J.

CHICAGO, ILL.	DETROIT, MICH.	CINCINNATI, OHIO	ST. PAUL, MINN.	LOS ANGELES, CALIF.
Harry Holland & Son, Inc.	Harry Holland & Son, Inc.	R. B. Busch	Alexander Seymour	Package Associates
400 W. Madison St.	1941 W. Fort St.	100 So. Ohio Bank Bldg.	1745 University Ave.	900 East 31st St.



IT'S FOOL-PROOF . . . THE 1935 ROLL TOP SPRING-CATCH LIPSTICK*

Easy to open, easy to close, with the same one-finger action. And this 1935 model absolutely cannot come open in milady's purse or bag. For an ingenious new combination friction and spring safety-catch locks the opening mechanism tightly when the stick is closed. The locking action can be felt in the fingers, and a distinct "click" notifies the user that the closing is completed.

Inside parts are firmly anchored into place in this new 1935 Roll Top, and the actuating band is given a free but guided channel for operation. Its trim lines allow for a great variety of decorative treatments. Special designs and stampings, and almost any combination of finishes, can be applied in quantity orders.

Scovill representatives are supplied with the new improved models, and will be glad to demonstrate their features to you. For the whole story, just call any Scovill office or drop a line to Scovill Manufacturing Company, Cosmetic Container Division, Waterbury, Connecticut.

★ The ROLL TOP LIPSTICK is fully protected by patents and is the exclusive property of Scovill Manufacturing Company.

NRA WE DO OUR PART U.S.

SCOVILL

S C O V I L L

SCOVILL MANUFACTURING COMPANY, WATERBURY, CONNECTICUT

Boston Providence New York Philadelphia Atlanta Syracuse Detroit Chicago Cincinnati
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MERCHANDISING NEWS

Quest and Dispenser

Coincidently enough, only last month we were talking about what Norwich found out when it investigated the deodorant market—that the big use for the deodorant powder is on sanitary napkins. Almost as we wrote, Kotex was releasing the first publicity on its new deodorant, "Quest," thus linking these companion items in a strong merchandising setup.

"Quest" is being introduced with a new dispenser, small enough to be carried in the purse, which is a highly convenient gadget, at the same time giving the druggist two sales, instead of one. This is another variation of the "nips" idea which we have been discussing in recent issues. "Quest" in an attractive can and the "Quest" dispenser, sell for thirty-five cents each, the dispenser to be filled as needed from the larger container.

Greatest Opportunity for 1935

Users of dentifrices have increased ten per cent a year since the depression. Even with this increase only two out of every five persons in the United States brush their teeth. Proceeding from these findings Colgate has decided "that the dentifrice market offers the drug industry one of its greatest opportunities for expansion and profit in 1935."

According to Colgate the "double your money back" guarantee, which continues, was responsible for more than a 200 per cent gain in sales to consumers. Especially significant is the fact that this sizable sales increase was made under a strict price maintenance policy.

Lilly's Plan

Eli Lilly's plan for aiding the retailer seems to be working out quite well. Briefly, it consists in securing the annual report of his store's operations from the retailer and then making constructive suggestions based upon it. In addition, each one participating in the service receives a digest of what other retailers report so that he may compare his own figures with the general average for rent, turnover, salaries, etc.

In 1933, 271 pharmacists made use of the service reporting on their 1932 operations; during 1934, 402 retailers reported on their 1933 operations. As compared with 1932, the 1933 reports showed (1) smaller volume, (2) better return per dollar invested.

Sloan's Cough Syrup

William R. Warner's Canadian company has been taking advantage of the current winter season to try out a new addition to the line, "Sloan's Cough Syrup." Results which have filtered down from Canada seem to be decidedly favorable, so much so that the American company will probably introduce it next Fall in this country. The package, consisting of bottle and carton, is well designed in modern, simple style. The carton, particularly, is good looking, and features the same head and signature which are characteristic of the "Sloan's Liniment" packages.

Admiracion's Small Sizes

Admiracion is introducing a companion product, a pine tar "Admiracion," and is making use of two deals to set the ball rolling. These new deals offer the consumer trial size packages of both olive oil and pine tar Admiracion at a price to compete with 5 and 10 and syndicate store toiletries. Admiracion is not sold through these outlets.

The deals feature a 10% additional profit to retailers in consideration of displaying the deals on their counters in the colorful merchandisers provided, which only take up seven inches of room on the counter.

There are two deals; No. 351 is on Admiracion Olive Oil Shampoo Treatment and offers the retailer 1¼ dozen trial size packages and ½ dozen regular size packages; and No. 352 on Admiracion Pine Tar Shampoo Treatment offers 1¼ dozen trial size packages and ¼ dozen regular size packages.

Melba's Lower Prices

Parfumerie Melba has introduced into its line an assortment of basic treatment necessities at a substantial price rearrangement to accommodate the thousands of women who, it was found, have not availed themselves of the benefits of a treatment line due to lowered income.

Changes in the line include reduction in the price of the $1.00 skin cleanser to 50 cents and the $1.50 size to $1.00, and the addition of astringent tonics, skin nourisher and face powder in the reduced sizes, and liquid foundation and astringent cream in $1.00 size.

Melba lays particular stress on the fact that it is not entering the 50 cent field, but is making available the basic treatment items at the lower price with the thought of stimulating the sale of the larger sizes.

Inside page of Ciba's clever mailing piece to the doctor on "Dial"—diallylmalonylurea. The telephone folds down over the lower dial which holds six sample tablets of "Dial."

Selling the "young idea," hair preparations. Tiny Tots' Beauty Shop in Mandel Bros., Chicago, conducted by Dr. Gladys Ogilvie, of Ogilvie Sisters.

Magazine Space and Radio Time

The largest drug and cosmetic advertisers during 1934 were Proctor & Gamble, $2,936,182; Lever Bros. Co., $2,239,453; Lambert Co., $1,965,819; Bristol-Myers Co., $1,390,898; Lamont, Corliss & Co., $1,164,008; Pepsodent Co., $923,504; Sterling Products, Inc., $899,356.

Largest buyers of radio time were Pepsodent Co., $1,642,153; Colgate-Palmolive-Peet Co., $1,333,873; Sterling Products, Inc., $1,240,403; American Home Products Co., $1,106,548; Proctor & Gamble, $969,236; Lady Esther Co., $963,836.

Selling Three Sizes

(Continued from page 293)

find its way into medicine cabinets as an economical, precautionary measure, in the case of a good many medicines.

At any rate, one thing is certain—package size should not necessarily be left to tradition or to competition. Original thinking, based upon accurate surveys, might prove of advantage in many other cases similar to those which have been suggested here. And, in the meantime, the dose size, the household size, and the bulk size, each seems to have a rightful place in the merchandising of drug products. Each, in its own way answers a very definite need from the consumer's point-of-view.

A SERVICE FOR BUYERS OF *Collapsible Tubes*

No container surpasses the collapsible tube in safety, convenience and in the matchless beauty of brilliant color combination.

Where your product is a cream, a cosmetic requiring a beautiful, well-designed container that will give individuality and personality to your product, let our design department cooperate with you in developing a striking container.

Our fifty years experience in the manufacture of collapsible tubes is cordially placed at your disposal.

WHITE METAL MFG. CO.
HOBOKEN, NEW JERSEY

COLLAPSIBLE TUBES *and* BOTTLE SPRINKLER TOPS

New York Office:	Chicago Office:	Detroit Office:
F. L. Butz	Charles A. Rindell, Inc.	R. M. Stevenson
393 Seventh Ave.	64 West Randolph St.	506 Donovan Bldg.

DODGE *Closures*

Designed to Guard the Integrity of the Contents

DRESSED UP TO SELL

IT'S the "Counter-clothes" which make the sale. The appearance of your product on the counter of the retail store definitely affects the decision of the customer to buy. And just as "Clothes make the man," so your product's "Counter-clothes" clinch the sale.

The makers of Aura Hair Fragrance have smartened up their bottle with a Dodge Molded Closure. In use, this closure is taken off and replaced with an atomizer bulb. No matter, for by that time the Dodge Closure has done its duty. It has "Guarded the Integrity of the Contents"—smartened up the package—made the sale. There is a Dodge Closure to perform a similar service for your product, too. Write to us. DODGE CORK CO., INC., LANCASTER, PA.

CORKS · MOLDED FLANGE CORKS · MOLDED QA CAPS

SYLPHSEAL

(Reg. U. S. Pat. Off.)

SELF-SEALING CAPS AND BANDS

For the Protection of Drugs and Cosmetics

SYLPHSEAL *Caps and Bands will hold primary closure in place, thereby preventing leakage, and deterring counterfeiting. They will also keep the closure in sanitary condition.*

SYLPHSEAL *Caps and Bands are beautiful in appearance and are easily applied. By giving to your closure an outstanding note of color in harmony with bottle or label they give a note of distinction to the bottle which attracts and holds the attention and results in repeat sales.*

These caps and bands are furnished plain or printed, and are made in the following grades: High Gloss enamel (U. S. Pat.) caps only, Silky Lustre (U. S. Pat. app'd. for), Regular Transparent, Mat Opaque, *Glossy Opaque and Metallic Bronze.*

SYLVANIA INDUSTRIAL CORPORATION

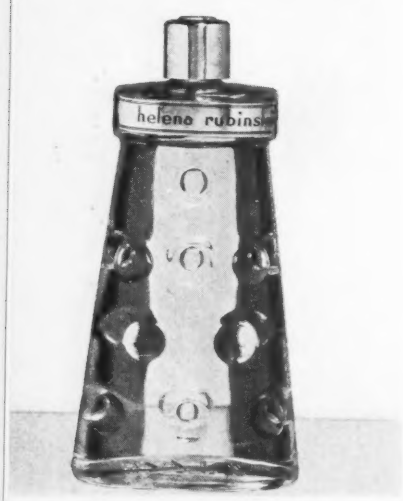
CAP AND BAND DIVISION

Executive and Sales Offices: 122 EAST 42nd STREET, N. Y. C.

NASAL APPLICATOR tubes are becoming increasingly popular, and molded plastic caps to fit the elongated applicators have been developed. Shown with these caps are Federex Nasal Relief, E. Z. Nasal Cream, and Frederics Vita Tonic, a scalp salve. Photo courtesy General Plastics.

"SOUS LE VENT", the latest of creations by Guerlain, is a delightfully new and distinctive odor, soft, subtle, fragrant and flowery. The name, Southern Breeze, as well as the odor was inspired by the fragrance of the mimosa-clad hills of Guadeloupe, swept by the warm trade winds of the Caribbean which blended the many scents from the rich vegetation to form one glorious perfume. The bottle is decidedly individual and is packaged in a yellow box with circular bands of silver.

"O-G-V," OGILVIE SISTERS new men's hair lotion, cleanses the scalp, banishes dandruff, tones the sluggish scalp cells, stimulates weak hair, retards falling hair and also acts as a dressing to keep the head well groomed. Other "O-G-V" preparations for men include Scalp Pomade for thin and straggly hair, a remedy for the fast receding hair line; "O-G-V" Castile Shampoo, "O-G-V" Alopecia Lotion for patchy baldness and "O-G-V" Special Ointment for healing irritated and sensitive scalps. Photo courtesy Dodge Cork Co.



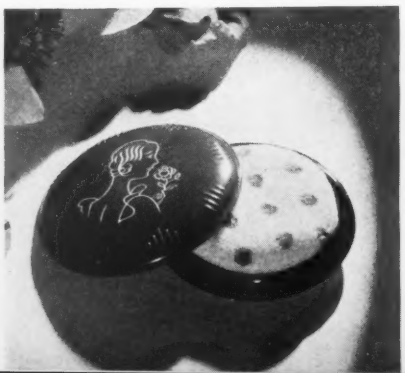
A smart polka-dot flacon holds HELENA RUBINSTEIN'S "Enchante" Eau de Cologne. The cologne has the same haunting fragrance characteristic of the "Enchante" bath essence and powder.

MAYNARD'S "Beautiful Lady Hand Cream" containing olive oil, almond oil and other ingredients to keep the skin soft, smooth, white and youthful is sold with their beauty gloves. Apply the cream, put on the gloves, and while doing your housework you effect a beauty treatment. The cream is also an excellent preventative of chapping, roughness and redness.

Lovely Lady, a trade-mark of ERNESTINE AMES LABORATORIES, appears on the attractive plastic jar of unusual shape and with unusual labeling. All flat surfaces being eliminated, makes the shiny black surface doubly lustrous. Photo courtesy General Plastics.

DORA MAY is marketing the attractive compact through chain stores. It is made of plastic material, giving light weight with smooth, colorful appearance. A tight, sift-proof sealing device is used, as well as a polka-dot puff and cellulose sifter-disc. Photo courtesy General Plastics.

CHERAMY has designed three Easter gift packages, one "April Showers" dusting powder; another, "April Showers" perfume "Charm," and a special combination of "April Showers" Purse Extract embedded in an Easter Egg of "April Showers" soap and tied with a purple ribbon. The packages are decorated with a bunny peeping over the horizon on a world of baby ducks and Easter eggs.



BONNEY LAVENDER LOTION, a product of Comfort Manufacturing Company, Chicago, is packaged in the two ounce size of a newly designed stock bottle of Carr-Lowrey Glass Company. Carton colors are white and orchid, with a black circle bearing the name in white.

HYRAL, a new dentifrice of the Hyral Company, Forth Worth, Texas, is perhaps the first dentifrice to be packaged in an oddly shaped opal jar. Another outstanding fact about the product is that it is made to retail at one dollar per jar.

CHARBERT'S new perfume is a delicate and exquisite gardenia odor of lasting fragrance. The bottles are boxed in white with decorative gardenias in green.

LA CROSS CREME NAIL POLISH by Schnefel Bros. comes in six shades, natural, coral, garnet, rose, cardinal and colorless. The remover is of the new oily type which is applied with a dropper. Both are packaged in round bottles with cream colored plastic tops.

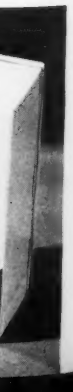
"POUDRE D'ILLUSION" by Elizabeth Arden is now available in a smaller travel size box, a replica of the former box done in the same pink with snap fastening.

COTY'S new hand lotion is described as "a complete beauty treatment for the hands." It is packaged in an opaque white, fluted flacon, with cap and label of soft rose pink, and retails at 75 cents.

The new DRUMSTICK COMPACTS by Charbert with matching lipsticks are developed in ivory with gold trimming, in black and in white. The design is more conservative and elegant than the former one, having the famous "Drumstick" in the center of the case. Both single and double are available.

JUNE SWAN products are packaged in containers all having a solid gray background with red decorations. The bottles are solidly colored in gray, and the label decorations are applied with decalcamania. A complete bath line is available, unique in its genuine floral compositions. Floral scents consist of a varied range including Verbena, Jasmin, Lilac, Carnation, Rose Geranium, with Eau de Cologne thrown in for the ultra-conservative taste.

SQUIBB'S new Hand Lotion, now being tested in certain centers, is most attractively packaged in a bottle of unique shape, with a label of black background and white and green decorations. Plastic cap is of green to match the label. Product, which is of the almond type, sells for 35 cents.



DEODORANT APPLICATORS

These attractive and practical applicators may be obtained with or without bottles to suit your particular requirements. Made by a special process, the rubber sponge dauber will not ride up the rod or pull off the end. The rod itself will not pull out of the cap.

In addition to deodorants, these applicators may be used to apply liquid depilatories, cuticle removers, "athlete's foot" remedies, liquid adhesives and shoe dressings and a variety of other liquid preparations.

We have had over 10 years experience in devising various types of applicators and closures and will be glad to apply this knowledge in solving your specific problems.

Send us the bottle you are using—or would like to use—and let us equip it with an applicator to fit. No obligation.

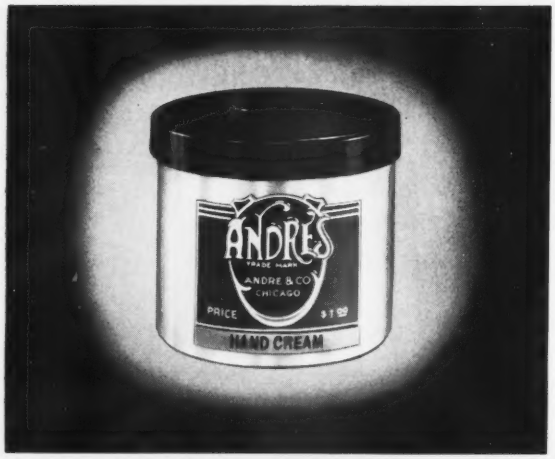
A. C. JAMES & CO., Inc.
99 HUDSON STREET NEW YORK, N.Y.

BOTTLES and JARS

- A full line of bottles and jars always in stock for immediate delivery.
- Available in small or large quantities. Jars: Clear, Opal or Colored, in all standard sizes—any quantity from stock.
- Perfume bottles, standard moulds or special design.
- Lotion bottles—many very attractive designs for your immediate use.
- Bottles and jars with and without caps. Let us quote on any size order for any type of bottle or jar.

HAGERTY BROS. & CO.
10 PLATT ST., NEW YORK CITY

Foil Labels
By TABLET & TICKET



Does your label SELL — or merely identify? Send for suggestions and samples of genuine Pertect-O-Cut embossed metal foil labels.

The TABLET & TICKET CO.
1019 W. ADAMS ST. CHICAGO, ILL.
Offices in all principal cities

RIEGELINE
FOR
TRANSPARENCY
WITHOUT EXPENSE

Riegeline is a newly developed product, combining the economy of ordinary glassine with the transparency of more expensive wraps. It twists well, works rapidly on any wrapping machine, and will not expand in wet weather or shrink to the splitting stage in dry weather.

LIBERAL SAMPLES AND PRICES PROMPTLY FURNISHED

RIEGEL PAPER CORP.
342 Madison Avenue · New York

APPLICATORS

ATTRACTIVE and practical applicators with a specially attached sponge dauber that will not pull out. Furnished with or without bottles. An ideal closure and applicator for every type of liquid preparation.

Let us fit one to your bottle. No obligation.

Quality Products...

Prompt Service at the Right Price

Glass PRODUCTS COMPANY

VINELAND NEW JERSEY

New York: L. A. Barber, 43 S. Portland Ave., Brooklyn, N. Y. ★ Atlanta, Ga.: Warren M. Curry, 2895 Peachtree St. ★ Chicago, Ill.: E. Marx & Co., 306 W. Washington St.

CAMEO

CAMEO labels and seals create the outward expression of your product by their exquisite Die Work and Printing.

Write for an assortment of outstanding labels designed and produced by us and note their superiority in design and craftmanship.

CAMEO DIE CUTTING & ENGRAVING CO.
140 W. 22ª ST. NEW YORK CITY WATKINS 9 - 4904

LABELS • METAL EMBOSSED • ENGRAVED

SELL IT WITH LABELS!

HORN LABELS freshen up your package for greater sales. Faithful service for over 40 years.

JOHN HORN, 837 Tenth Ave., New York City

(Sample booklet of labels sent to RESPONSIBLE MANUFACTURERS)

NAME .....

ADDRESS .....

CITY .....

LEAKY CLOSURES ?

AIR-TIGHT · WESTITE · HERMETIC CLOSURE · LEAKPROOF

Reg. U. S. Pat. Off.

SOLVES THAT PROBLEM, TOO!

5 Important Advantages:

1. Prevents closure seepage and corrosion.
2. Saves all clip expense.
3. Uses shorter tubes.
4. Prevents product deterioration.
5. Uses simplified closing equipment.

WRITE FOR FURTHER INFORMATION
to the following tube makers licensed to supply WESTITE process tubes

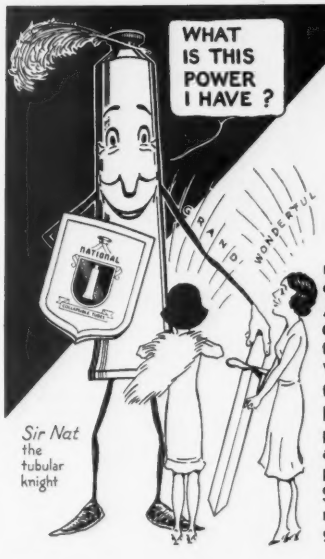
ATLANTIC MANUFACTURING CO., Newark, N. J.
NEW ENGLAND COLLAPSIBLE TUBE CO., New London, Conn.
PENNSYLVANIA COLLAPSIBLE TUBE CO., Williamsport, Pa.
STANDARD SPECIALTY AND TUBE CO., New Brighton, Pa.
A. H. WIRZ, INC., Chester, Pa.

Or direct to the

FJS **FJSTOKES MACHINE CO.**

Packaging Equipment since 1895

5932 Tabor Road Olney P. O. Philadelphia, Pa.



The Preference of Women

means much to manufacturers, distributors and retailers.

And for many reasons women do prefer certain items in tubes.

Would you care to know why they do?

If you make or distribute a product that is used by women and is applicable to tubular packaging, drop Sir Nat a line.

Suggestions, proposals, etc., made without cost or obligation to you.

National COLLAPSIBLE TUBE Company

PROVIDENCE, R. I.

New York Office: 331 Madison Ave., Tel. Murray Hill 2-0339

CHICAGO-C. J. EICHMAN CO. 355 W. ONTARIO ST. TEL. SUPERIOR 7939

DETROIT-J. P. GIROUX CO. 2970 W. GRAND BLVD. TEL. MADISON 5727

REPRESENTATIVES IN OTHER PRINCIPAL CITIES

PROTECTED

...against breakage by

Kimpak

REG. U.S. PAT. OFF. & FOREIGN COUNTRIES

CREPE WADDING

VIAVI COMPANY SOLVES SHIPPING PROBLEM

AS it has for hundreds of other firms, KIMPAK Crepe Wadding has solved the shipping problem for the Viavi Company, San Francisco. Viavi's medicines, when shipped, are protected by KIMPAK. The danger of breakage is minimized. Customers are spared the nuisance of handling messy materials.

KIMPAK is a soft, resilient crepe wadding that comes in sheets, rolls and pads of various thickness. It is ideally suited for packing of bottled liquids, for it will absorb 16 times its weight in moisture, and it conforms to Post Office regulations in regard to shipping liquids or liquefying products by parcel post. KIMPAK is free of dirt and foreign substances. It affords an adequate protection for fine finishes, reduces possibility of shipping damage. It is easily applied. Saves time, labor and money in packing.

KIMPAK can now be had backed with glassine in a wide variety of colors. Manufacturers of cosmetics and products which must be attractively packaged will find this form of KIMPAK an especially fine one for their purposes.

Let KIMPAK help you get and hold customers. Send for 1935 Portfolio of KIMPAK. Mail coupon to nearest sales office.

FREE! 1935 Portfolio of Kimpak

KIMBERLY-CLARK CORPORATION, Neenah, Wisconsin.
Address nearest sales office: 8 So. Michigan Ave., Chicago; 122 E. 42nd St., New York City; 510 W. 6th St., Los Angeles.

Gentlemen: Please send us the 1935 Portfolio of KIMPAK
DCI-3

Company .....

Address .....

Attention of ..... *Our Product is* .....

KIMBERLY-CLARK CORPORATION

NEENAH, WISCONSIN

Sales Offices: 8 South Michigan Avenue, Chicago 122 East 42nd Street, New York City 510 West Sixth Street, Los Angeles

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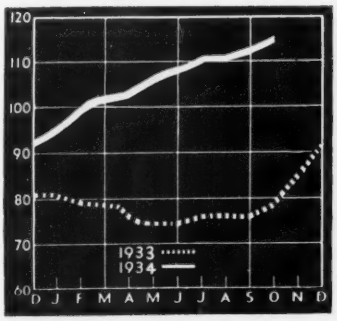
ALCOHOL NEWS

MARCH ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1935

ETHYL ALCOHOL PRODUCTION



(moving twelve-month averages, 1931 = 100)

		1934	1933
PRODUCTION			
1000 proof gals.	Jan.-Oct.	143,579	116,818
	October	21,332	16,509
	September	15,636	13,968
SALES			
1000 proof gals.	Jan.-Oct.	144,188	102,992
	October	34,241	22,538
	September	17,821	13,268

ALCOHOL SALES MAKE GOOD GAINS

While the latest available statistics on the production and sale of industrial ethyl alcohol to be released are for the month of October, they are decidedly encouraging. Sales scored a very marked gain for the month and, aided by heavy demand from the anti-freeze trade, exceeded production for the month by more than 11,000,000 proof gallons. This increase also served to bring the total sales from January through October above the total production for the same period.

Publication of the figures for production and sales by the Treasury Department was temporarily delayed but continuance of the previous schedules has been assured.

Withdrawals of industrial alcohols by the various consuming industries continued more active during February and the outlook is considered more favorable for this branch of the industry than it has been for some time.

IMPORT-EXPORT STATISTICS TO BE CONTINUED BY COMMERCE DEPT.

The Chemical Division of the U. S. Department of Commerce plans to continue publication of statistics on imports and exports of chemicals and allied products during 1935 according to word recently received from that division.

These statistics, most of which have been published for years, include coverage of medicinals, drugs, coal tar products, paint products, naval stores, chemicals and specialties, etc., and give both quantity and dollar value figures, together with other data.

A catalogue describing each statement in detail may be obtained by writing to the Department's Chemical Division.

Preparation and conservation of grape juice were recently studied with a view to having the juice retain the fresh fruit flavor. The addition of carbon dioxide to pressed grape juice during clarification was recommended to prevent the start of fermentation. After clarification, the juice should be sterilized, preferably by a filtration which will remove all bacteria.

No Change Pending on Tax

ALCOHOL NEWS has learned on good authority that no amendment to the Revenue Act, which would provide for a differential tax between distilled spirits for beverage use and industrial ethyl alcohol, is anticipated at this time.

R. L. LUND, TOASTMASTER FOR DRUG AND CHEMICAL DINNER

Mr. Robert L. Lund, Vice-President of the Lambert Pharmacal Co., will be the toastmaster at the tenth annual dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, to be held Thursday evening, March 21st, at the Waldorf-Astoria in New York. The name of the principal speaker is not available as this article is written but will be announced shortly.

More than fifteen hundred guests are expected to attend and an elaborate program has been prepared. It is definitely expected that this year's get-together will surpass those of former years in every respect.

There is still time, for those who have not already done so, to make reservations. Ray C. Schlotterer, Secretary of the Drug Chemical and Allied Trades Section of the New York Board of Trade, 41 Park Row, is in charge of the reservations. He may be reached by phoning COrtland 7-1414.

Prevention of the development of acidity in certain solvents, such as trichlorethylene, used in the degreasing of metal, cleaning of wool and fabrics, etc., may be accomplished by the addition of a small amount of suitable soap. A recent patent covering the process, suggests the use of a soap which will prevent precipitation in the presence of moisture, such as soaps containing polyglycols.

U. S. I. OFFERS NEW TECHNICAL BOOKLET DESCRIBING FULL LINE OF ALCOHOL-DERIVED CHEMICALS

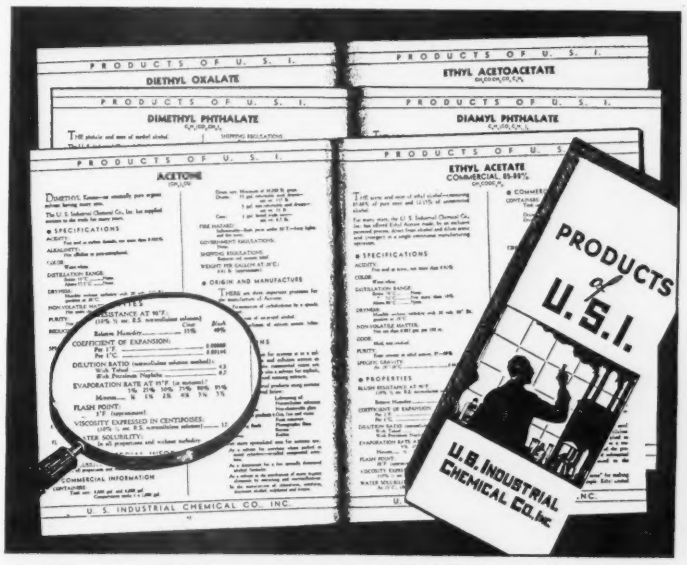
A new booklet, "Products of U. S. I.," describing in detail the forty-odd chemical products manufactured and sold by the U. S. Industrial Chemical Co., Inc., subsidiary of the U. S. Industrial Alcohol Co., has been prepared and is now ready for distribution to interested parties in the trade.

Information and technical data, heretofore not readily available have been incorporated to make this booklet of special value to the technical, laboratory and research worker.

The text includes specifications, properties, commercial information and describes the origin and methods of manufacture of the entire list of chemicals which are grouped into nine convenient classifications. The various alcohols, ethers, esters, phthalates, dyestuff and pharmaceutical intermediates, chemical by-products, etc., are all included.

More than a year was required in the preparation and compilation of the material included in the booklet which should be a valuable addition to the technical library of every industrial plant and educational institution.

Those who are now users of U. S. I. products will be interested in the new uses and the improvements that have been made. Those who are not now using any U. S. I. product will be interested in the many varied and highly specialized applications developed for many of them. One of these products might be the solution to some production or processing problem. *A request on your letterhead* is all that is necessary to secure a copy.



THE ABOVE FACSIMILE of the new technical booklet, "Products of U. S. I.," shows the concise treatment given the technical data making it easily available for ready reference. Cover of the booklet, which folds into a convenient pocket size, is shown at the right.

Prepared Monthly by the U. S. Industrial Alcohol Co.

ADVERTISEMENT—*This entire page is a paid advertisement.*

F. A. C. A. DEFINES INDUSTRIAL USES OF DISTILLED SPIRITS

The Federal Alcohol Control Administration in issuing General Regulations, Series 4, dated January 22nd, 1935, defines the industrial uses of distilled spirits as follows:

"(1) Use of alcohol or other distilled spirits or wine in the manufacture of medicinal, pharmaceutical, or antiseptic products, including prescriptions compounded by retail druggists; of toilet products, of flavoring extracts, syrups, or food products; or of scientific, chemical, mechanical, or industrial products; —provided such products are unfit for beverage use.

"(2) Use of tax free alcohol under regulations of the Treasury Department by any governmental agency, State or Federal, or any scientific university or college of learning, or any laboratory for use exclusively in scientific research, or any hospital or sanitarium.

"(3) Use of alcohol or other distilled spirits or wine which has been denatured or otherwise rendered unfit for beverage use in accordance with regulations of the Treasury Department."

All other uses are defined as "non-industrial uses."

As U. S. I. is operating under the Code of Fair Competition for the Industrial Alcohol Industry, it therefore restricts sales of its ethyl alcohol to the industrial uses as defined above.

COMPOUNDS FOR STABILIZING HYDROGEN PEROXIDE STUDIED

The stabilizing influence of various compounds on hydrogen peroxide has recently been investigated by a European chemist who reports that the addition of certain ingredients exercises a definite effect.

Acetanilide, quinine hydrochloride, urea, oxalic acid and phenacetine were all found to exert a stabilizing action.

Phenacetine showed exceptional results. Where as small a quantity as 0.04 per cent was added to a 3 per cent solution of hydrogen peroxide, it was stated that the latter retained its strength for as long as five years. As usual, the use of brown glass-stoppered bottles is essential. With a 30 per cent solution, keeping qualities are increased by storage in a cool, dark place.

Powdered or granular drugs may be compactly and accurately filled into cans, bags, or boxes with a new filling machine which can be adjusted to operate in three ways. The filling may be by gross weight, by pack-fill where the material is crowded in under pressure, or by a predetermined volume.

UNUSUAL ALCOHOL DERIVED CHEMICALS

This is the ninth of a series of articles describing some of the more unusual products manufactured and sold by the U. S. Industrial Chemical Co., Inc., using alcohol as the basic raw material.

Potash By-Products

Two potash by-products are recovered from the manufacture of industrial ethyl alcohol from molasses. Starting in war-time, when domestic potash was almost unobtainable, the U. S. Industrial Chemical Co., Inc., has continued production of these materials to the present date, and has contributed many thousand tons to the country's agricultural needs.

The exhausted liquor or dilute molasses residue from the alcohol distillation is the source of these two by-products. This residue, after concentration in large evaporators, is blown into special furnaces where, because of its high carbonaceous content, it burns by its own heat. I. C. Ash is the residue of this incomplete combustion. It is a crude potash material containing potassium sulphate, chloride and carbonate, and has a potash content, calculated as K_2O, of approximately 33 per cent. It is ground into a coarse granular powder, grayish brown in color.

When the evaporated residue is burned, the high heat developed volatilizes part of the potash salts. Also a large volume of steam, generated from the water present in the molasses residue, together with combustion gases, mechanically carry away a quantity of fine potash dust. When these gases are cooled to just above the boiling point of water (to obviate condensation) and filtered through an elaborate recovery system, the resulting product is Sulphate-Muriate. This is a high-grade material and has a higher potash content than the I. C. Ash. Calculated as K_2O, it is approximately 54 per cent. In appearance it is a fine, dusty, light-gray powder.

Both of these materials are valuable ingredients in the manufacture of fertilizer materials and are used extensively in this field.

The introduction of carbon dioxide under pressure into an antiseptic solution such as borax results in a liquid which is useful for spraying onto a wounded surface or cavity according to experiments reported recently in the Veterinary Journal.

TECHNICAL DEVELOPMENTS

The items in this column are gathered from many varied sources. Further information on any of them may be obtained by writing to U. S. I.

U S I

The presence of certain organic peroxides will improve the yeast fermentation process according to a European biochemist. A recent German patent claims the use of acyl peroxides, especially dinaphthoylditoluyl or benzoyl peroxides.

U S I

A bottle cap has been devised which contains a hollow cone tapering upwards with a small opening at the apex. When the bottle is shaken, the base of the cone is filled and thus when the cap is removed a measured dose is obtained in the hollow cone. The device may also be adapted to measuring drops.

U S I

A method for the addition of measured portions of concentrated Vitamin D to dairy milk products has been reported. It is said that the concentrated Vitamin is emulsified in cream and then added to the milk. Emulsions of the Vitamin are supplied in two strengths: six ounces of the stronger is reported sufficient to fortify 3,000 quarts of milk.

U S I

A new machine that permits gelatin capsules or other fragile drug products to be packaged automatically, in individual packages of transparent material, has recently been placed on the market.

U S I

A styptic preparation, recently patented abroad, consists of an alcoholic solution of ferrous iodide and free iodine mixed with a powdered material having a pectin content of at least 10 percent.

U S I

Essential oils made from the tobacco flower are recommended to improve the aroma of low grade tobacco according to a report from the U. S. S. R. where investigations have been conducted. A small percentage of the oils is added to the tobacco.

U S I

A vibrating feed hopper for installation on packaging equipment or in manufacturing processes, where accurate continuous feeding is required, is now on the market. A rheostat controls the vibration frequency which in turn controls the rate of feed of the machine.

U S I

Sulphonated fatty acid esters which contain the amido groups have been recommended for use in soapless shampoos. In addition to possessing good detergent properties, they are reported as very stable to both acids and alkalies. A small amount dissolved in water will form a thick compound which can be tinted and perfumed more readily than the plain sulphonated oils, according to a recent report.

U S I

Coils of lead-covered copper tubing in various shapes and sizes are being offered for corrosion-resisting heating units. The copper tubing is provided with a homogeneous lead covering inseparably bonded to the copper. Special shapes and sizes are also available for evaporators and heat exchangers.

U.S. INDUSTRIAL ALCOHOL CO.

WORLD'S LARGEST PRODUCERS OF INDUSTRIAL ALCOHOL

ETHYL ALCOHOL

SPECIALLY DENATURED-*All Formulas* • **COMPLETELY DENATURED**-*All Formulas* • **ANHYDROUS**-*Denatured* • **ABSOLUTE**-*Pure*
SOLOX-*The General Solvent* • **PYRO**-*The Standard Anti-Freeze* • **SUPER PYRO**-*The Rustproof Anti-Freeze*
PURE (190 PROOF) TAX PAID — TAX FREE
U. S. I.—U. S. P.-*Ethyl* • **WEBB'S**-*Ethyl* • **SUNSHINE**-*Ethyl*

Executive Offices: 60 East 42nd Street, New York, N. Y. Branches in all Principal Cities.

NEWS

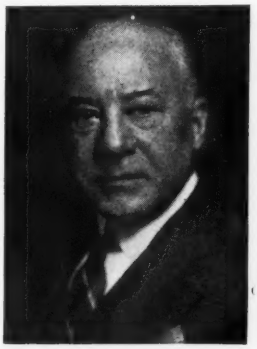
People

Wasserscheid Heads Drug Club

A. A. Wasserscheid, manager of the New York office of the Mallinckrodt Chemical Works, St. Louis, was elected president of the Drug and Chemical Club at the annual meeting held February 21. Other officers elected were as follows:—Vice-president, Lyman E. Thayer, an insurance broker; treasurer, A. A. Teeter, of Chas. Pfizer & Co.; secretary, Edward J. Sisley, of Sisley & Co., Inc.

Fred L. Stallman, of Stallman & Co., and Vincent P. Wyatt, of Crum & Foster, were elected to the Board of Governors.

The new president of the club is one of the most beloved members of the organization. Mr. Wasserscheid has been identified with the chemical industry in this city since 1890 and joined the club in 1907. He became manager of the eastern division of the Mallinckrodt Chemical Works in 1893 and has served that company continuously since that time. Philatelics is his hobby and he is the owner of a stamp collection highly regarded in philatelic circles. He is also a Mason of long standing.



A. A. WASSERSCHEID

Mr. Wasserscheid has taken an active, important, and constructive part in bringing the Drug and Chemical Club to its present prominent position among the business clubs of the city.

The annual report of the president paid a special tribute of appreciation to C. J. A. Fitzsimmons, of the Orbis Products Corporation, chairman of the House Committee, and members of that committee, for their unceasing effort to carry out important economies effected by the previous administration.

Frank Joins Rosenthal

Edward F. Frank, who for many years was associated with McIlvaine Bros., Philadelphia, has joined the firm of H. H. Rosenthal Co., New York.

Adkins Joins Schimmel

W. H. Adkins, for some years purchasing agent for Givaudan-Delawanna, Inc., New York, and before that associated with Monsanto Chemical Co., has become associated with Schimmel & Co., Inc., New York, in charge of sales in the New York territory.

D. P. Fellows has been appointed Boston representative.

Dr. Weed Named V. P.

Dr. Alfred Weed, chief entymologist of John Powell & Co., New York, has been elected a vice-president of the company.

Jay Quits Squibb

George S. Jay, for the past four years with E. R. Squibb & Sons, resigned his position with Squibb effective March 1. For some time prior to his resignation, Mr. Jay had been in charge of sales of Squibb products to wholesale druggists, as well as being sales manager of cod liver oil and mineral oil products.

GEORGE S. JAY

Mr. Jay is planning to take a rather extended trip with Mrs. Jay. He has not as yet announced his future plans beyond the trip.

Schaeffer Celebrates 30th Year

Carl E. Schaeffer, sales manager of Stokes & Smith Co., Philadelphia, this year celebrates his thirtieth year of association with that company. During that period he has served in all departments of the company and has become a recognized expert on packaging and filling machinery problems.

Hudnut's Home Burns

Fire in the Summer home of Alex M. Hudnut, of Richard Hudnut Co., at Allenhurst, N. J., February 26, destroyed valuable furnishings, including paintings and rugs, when the twenty-room structure was wrecked by flames.

Local fire officials estimated the loss tentatively at $25,000.

Huisking Reports on Abroad

Charles L. Huisking, president of the firm bearing his name, which company has extensive interest in the Norwegian cod liver oil industry returned recently from a short European trip including a visit to Norway.

Mr. Huisking is definitely of the opinion that in the mad race for higher and higher vitamin potency the quality of cod liver oil has suffered, and that much of the so-called high potency oil is the result of admixture of true cod liver oil with other oils, some of which are of the cod liver oil family but which are not of the same high grade as is the pure natural true cod liver oil.

Mr. Huisking reports that very intensive scientific work is being carried on in Norway and in other countries through which it is hoped to demonstrate the superiority of pure natural oil over these so-called high potency oils and similar products. Mr. Huisking states that he heard the opinion expressed by authorities

CHARLES L. HUISKING

to the effect that the human system does not require nor does it benefit from the use of products of extremely high vitamin content and is also hopeful that the efforts by one bottler to outdo another in the claims pertaining to the vitamin potency will soon cease as each claim of a prominent supplier is promptly raised by that of another, and he hopes that the trade will soon see the futility of this and agree to the adoption of a uniform labelling plan on more conservative lines.

Before visiting Norway, Mr. Huisking spent a week in London and was impressed with the marked evidences of improved conditions prevailing there. England is in a better mood and on all sides one hears confirmation of better business. The railroads of Great Britain reported an increased income of some £5,000,000 for last year brought about substantially through the carrying of goods in the heavy industries which fact in itself spreads confidence very generally.

Mr. Huisking also visited Germany where every indication points to peaceful and quiet conditions throughout the country with increased business within, but with import and export trade seriously handicapped.

Veale and O'Connor Advanced

Two Colgate-Palmolive-Peet executives, *W. R. Veale and Manning O'Connor, have* been advanced to more important positions *in the company. Announcement of*

WILLIAM R. VEALE

MANNING O'CONNOR

the promotion was made by E. H. Little, vice-president in charge of sales and advertising.

Mr. Veale, formerly manager of the toilet article department, becomes manager of the soap department. He is succeeded by Manning O'Connor, who since the latter part of 1933, has been sales manager of the toilet article department.

May Quits Walgreen

Walter N. May has resigned as advertising and merchandising manager of Walgreen & Co., Chicago, to establish his own merchandising counsellor service in that city, specializing in the drug field.

L. P. Shinn

L. P. Shinn, drug and toilet goods buyer for Wieboldt Stores, Inc., Chicago, has left that organization to go with the Ford Hopkins Drug Co., in a merchandising capacity.

Gabrielsen Advanced

John E. Gabrielsen, for the past two years assistant sales manager, has been appointed sales manager, Hinze Ambrosia, Inc., New York.

Smith & Hill—J. & J. V. P'S

George F. Smith, director of merchandising *of Johnson & Johnson, and Arthur* B. Hill, manager of salesmen, have been *made vice-presidents of the Johnson &* Johnson, New Brunswick, N. J.

A. R. Clapham is still first vice-president and general sales manager.

Gert Keller Marries

Gert Keller, *general manager of Schimmel & Co., Inc.*, New York, was recently *married to Ruth Jane Williams, a jour*nalist, formerly associated with the Paris office of the N. Y. *Herald-Tribune* and the International News Service in Paris.

Henriksen in Paris, Tenn.

D. F. Nealon of the National Toilet Co., Paris, Tenn., has sent us the following note:

"Arthur Henriksen visited Paris, Tennessee this week renewing his vows and becoming more proficient in the ancient mysteries of the Oriental Order of Humility.

The home lodge failed to provide barbecued chicken and Mr. Henriksen showed his displeasure by completely demolishing the high priest's car."

King Wires Corkran

Sewell H. Corkran, New York representative of A. H. Wirz, Inc., and E. N. Rowell Co. was recently on the receiving end of the following telegram from Everett King, of the Lorscheider, Schang Co., New York. The wire was addressed to Mr. Corkran at Stamford Hospital.

NORWALK CHAPTER NEW ENGLAND HOSPITAL SUPPORTERS ASSOCIATION STRONGLY SUPPORTING YOUR CANDIDACY LIFE PRESIDENCY OF ORGANIZATION STOP PLEASE DENY REPORTS YOU ARE ETHER ADDICT THAT YOU HAVE FINANCIAL INTEREST STAMFORD HOSPITAL AND THAT YOU JUST GET TIRED PERIODICALLY STOP OUR CAMPAIGN SLOGAN IS SEWELL'S A CORKER AND HE CAN TAKE IT.

EV. KING.

To the uninitiated—Mr. Corkran and his family have been in the hospital so often lately that Mr. King was inspired to send the above.

Hyatt Marries

Paul W. Hyatt of the Brass Goods Manufacturing Co., Brooklyn, was married February 1, to Celeste Anne Eames of Buffalo.

The Dirrs Make It a Dozen

Peter Aloysius Dirr, and Mrs. Dirr announce the birth of a son, James Aloysius Dirr, on Friday, February 8. James Aloysius is number twelve in a series of Dirrs all of whom are middle-named Aloysius. When interviewed concerning the arrival of this twelfth heir to the Dirr fortunes, including one slightly used derby hat, Mr. Dirr assured his public, whose middle name is also Aloysius, that the next time it would be at least twins. He and Mrs. Dirr, he said, have a distinct aversion to thirteen, so that the next time this story appears it will be fourteen or better.

Mr. Dirr took advantage of the occasion to deny that he had had a good offer from Premier Mussolini to make a barnstorming trip through Italy in connection with Il Duce's "Have More Babies" campaign. However, he modestly consented, on behalf of Mrs. Dirr and himself, to accept a suitable award as having done the outstanding production job in this industry.

POWCO

LABORATORY CONTROLLED

BRAND

REG. U.S. PAT. OFF.

NEUTRAL POWDERED SOAPS

for

YOUR DENTIFRICE

Most soaps are made strictly on a quantity production basis. The soap maker's skill is largely the art of switching various oils (raw materials) so as to take advantage of the most economical ingredients which will produce nearly constant physical characteristics, such as lathering value.

Practically all such soaps are good for ordinary soap requirements, but obviously such soap making procedure is highly unsafe for the buyer who must have absolute uniformity of quality and chemical constants.

For the production of fine Neutral Soap, the same grade and kind of raw materials is essential. Even this does not suffice, for no matter how skilled or conscientious the soap maker may be, he must fail on the character of product you need, if careful chemical control does not supervise production from the selection of raw materials to the final tests on the pulverized product.

That is one of the secrets of success of POWCO BRAND—Laboratory Controlled—Neutral Powdered Soaps.

Send for samples and compare

JOHN POWELL & CO., Inc.

114 East 32nd Street, New York, N. Y.

Tested Quince Seed ● Powdered Neutral Soaps ● Concentrated Shaving Cream Base

Brooks Elected Assn. V. P.

H. L. Brooks, of Coty, Inc., New York, has been elected first vice-president of the

H. L. BROOKS

Associated Manufacturers of Toilet Articles.

Hans Schettler Here

Hans Schettler, vice-president and director of Schimmel & Co., A.G., Miltitz, arrived on the "Europa," February 22, to investigate market conditions and business prospects in this country. He is making his headquarters at their associated branch house, Schimmel & Co., Inc., New York.

Watson on West Coast

Rupert C. Watson of Ungerer & Co., New York is on a five week's business trip to the Middle West and the Pacific Coast. Mr. Watson specializes in the sale of synthetic aromatic chemicals, perfume bases and raw materials of M. Naef & Co., Geneva, Switzerland, who are represented in this country by Ungerer & Co.

He is spending the major portion of his time in Hollywood and Los Angeles, stopping en route at Chicago, Des Moines, Kansas City, Salt Lake City, and San Francisco.

Dr. Ittner Speaks

Dr. Martin Hill Ittner, director of research and chief chemist of the Colgate-Palmolive-Peet Co., Jersey City, was guest speaker at a round table discussion conducted by the American Institute of the City of New York in its meeting rooms on February 11. Speaking on "Utilization of Odorous Substances," he traced the development of the use of aromatic materials in soaps and cosmetics and in general industrial products.

The discussion following Dr. Ittner's talk, was led by Col. Marston T. Bogert, professor of organic chemistry at Columbia University, as chairman of the meeting.

Downs-Abbott Ad. Manager

Abbott Laboratories, North Chicago, announces the appointment of Charles S. Downs as advertising manager. He succeeds C. R. Jackson who died recently. Mr. Downs has been a member of the Abbott advertising department for the past four years and, prior to this, was with the Swan-Myers Co., Indianapolis. E. M. Schriner who has been with the Abbott organization thirteen years, will serve as assistant manager and have charge of sales promotion activities. E. E. Wishard, M.D., whose writing experience in the ethical pharmaceutical field extends back twelve years before he joined Abbott as a professional service representative, is transferred to North Chicago to handle medical copy. Harry J. Foley, formerly of Edwin Bird Wilson, Inc., financial advertising agency, is now in charge of layout and production.

Wrigley Pharmaceutical Elects

George S. Bross has been elected treasurer of the Wrigley Pharmaceutical Co., Atlantic City, N. J., manufacturer of tooth paste, and Archie T. Riggin has been named secretary. They succeed the late Robert P. Gallagher, who was secretary and treasurer of the company.

Baker Establishes Fellowships

J. T. Baker Chemical Co., Phillipsburg, N. J., has again established two research fellowships in analytical chemistry for 1935-36. These fellowships are provided each year to one college in the East and one in the Middle-West and each is for one thousand dollars.

Hardy Gains Control of Leigh

Leigh Cosmetics, Inc., New York, announces that William H. Hardy has purchased the interest of Samuel C. Thomas, formerly president, and thus has gained complete control of the organization. Thomas La Prelle has been appointed general sales manager.

R. L. Watkins to Varick St.

R. L. Watkins Co. announces removal of its offices to 170 Varick st., New York, in the same building where other divisions of Sterling Products, Inc., are located.

Prince Gagarin Perfumes

Prince Alexis N. Gagarin, Inc., New York, has opened sales and executive offices at 551 Fifth ave., that city. Officers are president, Prince Alexis N. Gagarin; vice-president, V. A. Hanson; secretary-treasurer, B. G. Hamilton. Baron Boris A. Mengden is general merchandising manager.

Budd Joins Ungerer

Ivon H. Budd, long well known in the perfume and aromatic chemical industry, is now associated with Ungerer & Co., New York, as a specialist in perfumery, and in charge of sales development in this division of Ungerer's business. With him as members of the Ungerer organization, are most of the staff of the Budd Aromatic Chemical Co., including the perfumers, William Dunney, Sr., and William Dunney, Jr. Under the new arrangement, the Budd Aromatic Chemical Co. will retire from business.

FRED UNGERER

IVON H. BUDD

Ivon Budd first started sniffing in vats and kettles just after the war in the research laboratory of Chiris & Co., then at Delawanna, N. J. From there he transferred his genial smile to Julian Lyon & Co., later to buy out this firm with A. M. Wangler to form the company of Wangler Budd Co.

Early in 1931, Mr. Budd formed the Budd Aromatic Chemical Co., representing Polak & Schwartz, of Zandam, Holland, and developing perfume specialties for the trade.

The association of Ungerer & Co.—one of the oldest and best known houses in the essential oil business—with I. H. Budd, (Buddy to thousands) and Bill Dunney Sr., (Pa to his friends) and Bill Dunney Jr., (Bill when you know him), is something that customers and friends will welcome with the pleasant feeling that everyone is better off.

SPECIALTIES . . .

from our Newark, N. J. Factory

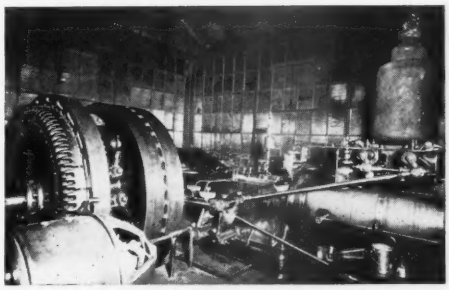
ANETHOL CARVACROL EUCALYPTOL
SAFROL OIL SASSAFRAS ARTIFICIAL
THYMOL CHLORTHYMOL

ESSENTIAL OILS

Aromatic Chemicals and Aromatics

We handle and stock a complete line of aromatic products. Our connections abroad and in this country and our own laboratory facilities enable us to supply you at once.

Essential Oils
Aromatic Chemicals
Perfume Compounds
Balsams
Oleoresins
Fruit Flavors



UNIFLOW ENGINE GENERATING ELECTRIC POWER

Our modern, well equipped factory at Newark, N. J. includes a thoroughly up-to-date distilling plant, a thymol and refrigerating unit, fully equipped mills for grinding and powdering and an excellent, modern laboratory. Our factory is always open for inspection.

COSMETIC RAW MATERIALS

We are primary factors and importers in the basic raw materials used in cosmetics. Many of these are specialties which we bring in as direct representatives of leading foreign producers. These include:

Stearic Acid
Precipitated Chalk
English Kaolin
Spermaceti
Rice Starch
Beeswax
Zinc Oxide, etc.

WATER SOLUBLE GUMS

ARABIC TRAGACANTH KARAYA

Powdered and whole form

All pulverizing done in our own mills at Newark, New Jersey

Send for our complete price list of Aromatic Products, Chemicals and Raw Materials, Gums and Specialties.

ORBIS PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK

Factory & Laboratory: NEWARK, N. J.

Branch Offices:

CHICAGO	PHILADELPHIA	BOSTON	LOS ANGELES
844 Rush St.	253 Bourse Bldg.	131 State Street	742 So. Hill St.

Fritzsche Holds Dinner-Dance

The annual dinner-dance of the employees of Fritzsche Brothers, Inc., was held Saturday evening, February 9, at the Astor Hotel, New York. Of the one hundred and sixty employees, there were one hundred and thirty in attendance, inclusive of the officers: F. H. Leonhardt, president; Wm. A. R. Welcke, vice-president and treasurer; B. F. Zimmer, second vice-president; Geo. L. Ringel, third vice-president; A. D. Armstrong, secretary; J. H. Montgomery, assistant secretary; R. R. Redanz, assistant treasurer and the following representatives from nearby territories: J. R. Eller, Columbus; M. J. Niles, Boston; Wm. F. Kiefer, Philadelphia; J. F. Shumaker, Columbus; Geo. Fellows, Atlanta; J. H. McNamara, New York; C. Schneider, New York; J. J. Cummings, New York.

The number of employees has been increased by approximately 25% during the past year, made necessary by the greatly increased volume of business enjoyed by the firm. It is worthy of note that throughout the depression years from 1930 to 1934 the organization was kept entirely intact. The length of service represented at the dinner is also of special interest. Of the total one hundred and sixty employees, only fifty-three have been with the firm less than five years; thirty from five to ten years; forty-three from ten to fifteen; fifteen from fifteen to twenty years; twelve, twenty to twenty-five; one, twenty-five to thirty; three, thirty-five to forty; two, forty to forty-five and one, precisely forty-nine years—a quite unusual record.

In keeping with the usual custom of this annual dinner, which is solely for pleasure, there was no speech-making, except a few words of welcome by F. H. Leonhardt, president of the firm, who also led in a silent standing tribute to the memory of F. E. Watermeyer, former president, who passed away in March, 1934.

F. H. LEONHARDT

Admiracion's New Product

Admiracion Laboratories, Inc., Newark, N. J., under the management of Stanley I. Clark, former sales manager of Lehn & Fink, announces a new companion product to "Admiracion Soapless Shampoo Treatment." The new product is a soapless pine tar shampoo treatment and has many features in common with its companion product. It is soapless, latherless, contains no alkali or alcohol. "Davolene," the natural tonic ingredient introduced by Admiracion to help correct abnormal scalp conditions, is also incorporated in the new pine tar shampoo.

Alsop Appoints Lilly

Alsop Engineering Corp., New York, has appointed W. H. Lilly its Ohio representative. Mr. Lilly who has had a great deal of experience with liquid processing equipment will cover Frankfort, Louisville, Indianapolis and neighboring districts in addition to the general Ohio territory. His headquarters are located at 1903 Berkley Ave., Cincinnati.

Stoughton Joins Coppage

W. W. Coppage, New York, has announced removal of offices and laboratory to new and larger quarters at 158 East 30 st., that city. Philip Stoughton, formerly associated with R. A. S. Laboratories, is now acting as chief chemist for the Coppage organization and also carrying on a private consulting practice. Telephone —LExington 2-1853.

Seeck & Kade Joins A.N.A.

Seeck & Kade, Inc., New York, has been elected to membership in the Association of National Advertisers, Inc.

Franz E. Loes, vice-president and treasurer, will represent the company in the advertisers' association.

Colgate on Soap Advances

S. Bayard Colgate, president, Colgate-Palmolive-Peet Co., is the author of an article, "Modern Soap Industry Made Possible by Advances in Chemical Control" in the February issue of "Monsanto Current Events."

S. BAYARD COLGATE

Williams-Walgreen Ad. Mgr.

S. L. Williams has been appointed advertising manager of the Walgreen Co., Chicago. He was formerly with the Chicago office of Batten, Barton, Durstine & Osborn, Inc., and, more recently, has been promotion manager of the Chicago *Herald and Examiner*.

Schoenith To Make Cosmetics

J. F. Schoenith, president, J. Schoenith Candy Co., Charlotte, N. C., has purchased a plant at 1410 West Morehead st., that city, and plans to engage in the manufacture of cosmetics. The reported purchase price was $40,000 and he plans to spend about $15,000 for equipment.

FRITZSCHE BROTHERS DINNER DANCE

Price's STEARIC ACID TRIPLE PRESSED

Prepared from the finest materials and entirely free from adulterants

Our triple pressed Stearic Acid is used by leading manufacturers of the finest toilet preparations, shaving creams and toilet soaps.

Of guaranteed English manufacture, it is highly crystalline and white in color.

Melting point 130°-133° F.

Unvarying uniformity in quality.

Packed in slabs of about one inch thickness in double burlap bags with a third protective inner bag forming a muslin liner.

Quotations for carloads or less upon application to

Exclusive American Representatives:

Orbis Products Corporation

215 Pearl Street New York, N. Y.

Manufactured by Price's Patent Candle Company Limited of London

Antoine Line Sold

Antoine de Paris, an American company manufacturing and distributing a complete treatment line, has, according to reports from well informed sources, been purchased from Hyman & Hyman, Inc., by the American Safety Razor Co., who will manufacture and distribute the line through their subsidiary company, Lightfoot-Schultz Co., Hoboken, N. J.

E. M. FOUGERA

Hyman & Hyman first introduced this line in the spring of 1932. A high quality, complete treatment line sold only through demonstration. it has made substantial and satisfactory growth during a comparatively short time.

E. M. Fougera, who was associated with the company since January, 1932, and who originally was in charge of development of formula and manufacturing methods suitable for the American market; and, in addition to other consulting work, plans to remain in a consulting capacity to Hyman & Hyman for the Farel Destin line which the company is retaining.

Mr. E. M. Fougera, for many years prominent in the cosmetic branch of the industry, is a grandson of E. Fougera, founder, in 1849, of E. Fougera & Co. At one time he was associated with National Aniline & Chemical Co., and for six years he was in complete charge of production in the New York laboratory of Rigaud, Inc. Still later he was in the New York laboratory of the Owl Drug Co., and then with Walgreen. He has also developed a new type permanent hair lotion which will appear on the market with other Hyman & Hyman products about March 15.

Hoge Speaks in Phila.

James F. Hoge of Rogers, Ramsay and Hoge, spoke before the Philadelphia Drug Exchange at a noon-day Luncheon sponsored by the Legislative Committee of the Exchange on February 26, 1935 at the Penn Athletic Club. Mr. Hoge addressed the gathering on the subject of "Food and Drug Legislation" now pending before Congress.

Cream and Ointment Book

Alcefa Laboratories, New York, has just published a booklet descriptive of two new products, "Almecerin" and "Cefatin," which are described as "perfect products for the simple preparation of superior creams and ointments.". It is further claimed that simple emulsification with water converts them into excellent creams and ointments. Copies of this booklet, describing the properties of these bases and also practical hints for manufacturing products from them, are available upon request to the company.

Parento's French Oils

Addington Doolittle, president of Compagnie Parento, Inc., Croton-on-Hudson, New York and Compagnie Parento, Ltd., Toronto, who recently returned from Europe, has appointed a representative in France to look after the interests of both companies.

Compagnie Parento will supply, in the future, absolute flower oils and other French oils under their own label. These will be manufactured in France in accordance with the same high standards already established by Parento. Through Parento's own resources and connections abroad, it is now in a position to meet the most exacting requirements of the trade in every respect.

The manufacturing facilities of the plant of Compagnie Parento, located in Croton-on-Hudson, N. Y. will be increased.

Scene at the party given by Health Products Corp. to the chain store executives on the Sunday evening previous to their recent convention in New York. Before this party at the Congress Night Club, the gathering attended the Feen-A-Mint broadcast. A similar party was given to wholesalers the following Sunday evening.

IN THE LAST ANALYSIS, THE SALES OF YOUR PRODUCT HINGE ON THE QUALITY OF ITS

BASIC INGREDIENTS

Almond Meal
Balsam Tolu
Benzoin Gum
Chalk (precipitated)
Chinese Shavings
Cuttle Fish Bone
FACTOLAC
Gum Arabic
Gum Tragacanth
HENNA
Henasoap Shampoo
Indian Gum (Karaya)
Talcum
Irish Moss
Lavender Flowers
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HOPKINS' NEUTRAL WHITE SOAP

Powdered, granulated Contains NO soap bark, free alkali, free acid or heavy metals. Totally free of rosin, sugar and foreign matter.

QUINCE SEED

Choice qualities rich in mucilaginous content.

In your preparation, the chain of its ingredients is only as strong as its weakest link. Neither clever merchandising nor effective advertising can replace the product's job of "delivering the goods." For more than 40 years, America's outstanding toiletry successes have relied on Hopkins' Basic Ingredients for the tested, full-strength, true-to-name quality which has helped elevate them to their present position of leadership.

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Powdered, Grained

GUM KARAYA
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Alurate and Sodium Alurate manufactured by Hoffmann-La Roche, Nutley, N. J. This is allylisopropylbarbituric acid and its sodium salt. Actions and uses are essentially similar to those of barbital, but alurate is more active than barbital and is used in correspondingly smaller doses. Fractional doses are used as a sedative and larger doses as a hypnotic. Therapeutic doses act on the higher centers of the brain and are claimed not to exert any apparent injurious effect on the heart, circulation or kidneys.

Penick Buys McLaughlin

S. B. Penick & Co., New York, has purchased the entire line of botanical drugs and related materials of McLaughlin, Gormley, King Co., Minneapolis.

S. B. PENICK

Fashion Toiletries Formed

Fashion Toiletries, Inc., has been organized with headquarters at 14 East 38th st., New York. The firm is headed by Rudolph Storfer, Lee DeBoer and Mort Livingston.

Schimmel Publishes 1933 Report

Schimmel & Co., Inc., New York, has announced the publication of the 1933 edition of the Schimmel "Report on Essential Oils and Synthetic Perfumes." This well-known work will be made available to customers and subscribers.

The recently formed American agency for Schimmel & Co., A. G., Miltitz near Leipzig, Germany, has also issued its first price list. It includes the complete range of essential oils, aromatic chemicals, flower oils, resinoids, liquor flavors and fruit flavors for which the Schimmel organization is known.

California Cosmetic Officials

California Cosmetics Corp., Hollywood, announces election of the following officers: president, F. A. Fetsch Vice-president, A. M. Fetsch, secretary-treasurer, C. S. Fetsch.

STEARNS
STEARNS
A typical Drug Store when the house of Frederick Stearns & Company was founded 1855
COME INSIDE TO SEE A MODERN DRUG STORE

A new departure in window displays inaugurated by Frederick Stearns & Co. is this three dimension reproduction of an old oil painting which was specially painted for the founder of the house of Stearns back in 1855.

Associations

A.M.T.A. Convention Plans

With the first signs of Spring (an essential oil salesman says he saw one in Central Park) thoughts of the perfume and cosmetic branch of the industry naturally turn to the annual convention of the Associated Manufacturers of Toilet Articles.

This year plans are getting under way slowly, and because of this, a new schedule of time and place is facing the entertainment committee which is again under the chairmanship of Charles E. Kelly, of Hagerty Brothers. Present tentative plans set the date for the third week of May. The selection of place is now before the association members with three choices: New York City, Briarcliff, N. Y., and White Sulphur Springs, W. Va.

CHARLES E. KELLY

With the return to the committee of L. R. Root, for many years a committee member, and with the acceptance of the many other experienced members of the entertainment, Charlie Kelly is certain to be able to pull things together in a most satisfactory manner when the decision on time and place is arrived at. For it was this same committee, headed last year by Charlie Kelly, that quietly and smoothly produced one of the most successful programs in the history of the association.

Committee members are: Charles E. Kelly, Chairman; W. C. Young, Karl Voss, B. J. Gogarty, W. P. Murray, A. C. Burgund, L. R. Root, W. E. Klaas, Charles Fishbeck, M. Lemmermeyer, Paul W. Hyatt.

Talks on Imitators

The regular monthly luncheon meeting of the Drug and Chemical section of the New York Board of Trade was held February 26 at the Hotel McAlpin, New York. *The speaker was Daniel L. Morris*, of Wormser, Morris & Kemp, and the *subject* "How to Protect Your Products from Counterfeiters and Imitators." The *meeting was conducted by Herman G.* Weicker, chairman of the section, and the speaker introduced by S. Mayham, editor of "American Perfumer."

A. Ph. A. Meeting

The eighty-third annual meeting of the American Pharmaceutical Association will be held in Portland, Oregon, August 5 to 10.

D. S. C. Meets

The Druggists Supply Corp. held its annual convention at the Hotel Pennsylvania, New York, from February 18 to 23 inclusive.

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Titanox-A is the most opaque of the white pigments and retains its opacity in the presence of oils.

It also has excellent adhesive qualities which impart superior lasting properties to powders and grease paints.

In addition Titanox-A provides these other desirable characteristics:

Chemical inertness; physiologically and dermatologically non-toxic, excellent absorptive properties; ease of dispersion in water; excellent dulling effect; high degree of purity; and uniformly fine texture.

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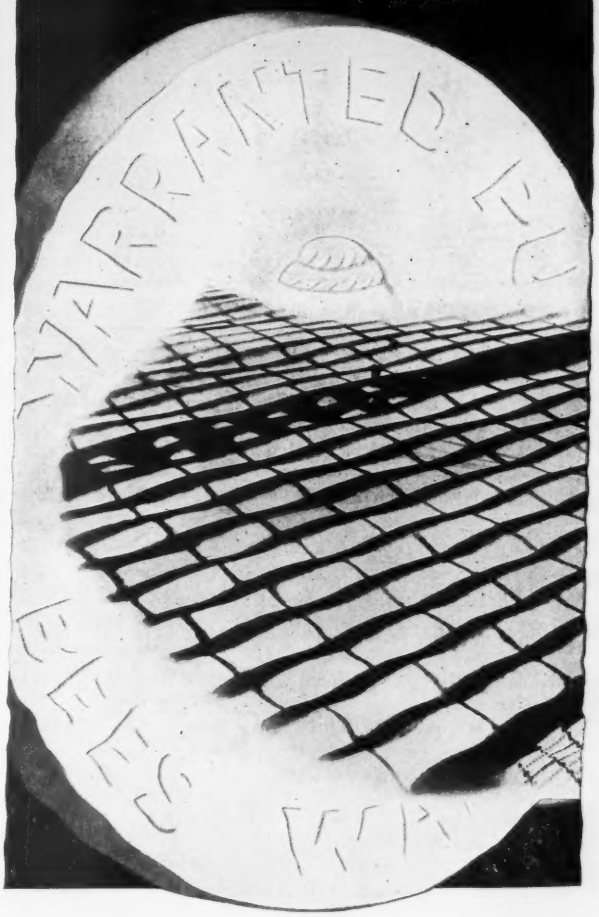

● In our modernly arranged bleachery, Beehive Brand Beeswax is sun-and-air bleached. This natural bleaching is far slower and more costly than ordinary chemical bleaching, *but it results in an infinitely better product.* The bleaching is superintended by veteran workers who have spent their lives specializing in the production of fine beeswax.

Will & Baumer's painstaking bleaching assures the pure white beeswax which produces fine white creams. For further information, write to:

Department A-9

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N. P. & Cosmetic Assn. Meets

The National Perfume and Cosmetic Manufacturers Association, Inc., organized about a year ago to promote the welfare of manufacturers of popular-priced cosmetics and toilet preparations, has now been incorporated under the Membership In-

CHARLES H. OESTREICH

corporation Law of the State of New York. By-laws covering the activities of the Association and the duties of the officers and directors have been drawn up.

Charles H. Oestreich, president, called a general meeting of Association for March 12 at the Hotel McAlpin, New York. By-laws were presented to the membership and plans for securing additional membership and for other activities of the Association were discussed.

Package Medicine Code

The package medicine industry Code Authority has submitted an application for NRA approval requesting that the industry members whose net annual sales of package medicine during 1933 was $5,000 or less, and whose total net sales of such medicine during that period represents less than 10 per cent of their total business volume, be freed from the necessity of contributing to the administrative expense of the code.

The application asks that Administrative Order X-36—which exempts members of an industry from contributing to a code other than the one which embraces their major line of business—be terminated insofar as it affects industry members whose net sales during 1933 exceeded the $5,000 figure.

Mineral Oil Duty Case

As announced in our last issue the U. S. Court of Customs and Patent Appeals in Washington, in a unanimous decision on January 7th, 1935, declared imported Paraffinum Liquidum (Russian Oil) duty-free, thereby reversing a decision of the U. S. Customs Court, New York, of February 21, 1934, which had upheld a Treasury Dept. ruling of February 1, 1932.

"According to Dr. S. Schwabacher, of S. Schwabacher & Co., Inc., New York, who has prepared this analysis of the decision," this Department ruling had reclassified Russian Mineral Oil from paragraph 1733 of the 1930 Tariff Act (free list, all distillates obtained from petroleum, including paraffin oil) to paragraph 5 (dutiable list—all medicinal preparations).

"The Department in this ruling had indicated that although, in the customs appraiser's opinion, Russian Oil possessed no therapeutic qualities for the reason that it cannot be assimilated into the system, but acts merely as lubricant; nevertheless it is used for human intestinal lubrication, and therefore has therapeutic qualities.

"The Bureau therefore was of the opinion that, applying the doctrine of use, the provision in paragraph 5 for medicinal preparations controlled over the free list paragraph, and thereupon directed the Collector of Customs to assess the 25% ad valorem duty on further importations.

"This ruling was rather unanimously criticized in a number of editorials in the leading trade magazines. They pointed out that if the ruling would be allowed to stand, a precedent would be established, which would permit the Treasury Department to place any medicinal raw material in the dutiable class, although it might be the intent of the tariff law that it remain on the free list. Therefore every drug and cosmetic manufacturer, whether or not he uses mineral oil, would be vitally interested in the far-reaching effects of this decision. Particular attention was called to articles like croton oil, quinine sulphate, santonin, cod-liver oil, anti-toxins, or any other prepared article used medicinally, that is named in the free list. It was pointed out that to argue that any "doctrine" confers authority to make such arbitrary changes by reclassification is to disregard utterly the provisions of the Constitution. It was further indicated that a large part of imported mineral oil is used as lubricant for a variety of purely industrial purposes, like in the textile industry, where the doctrine of use could hardly be applied. Attention was also directed to the fact that the imported oil is called in the United States Pharmacopoeia, among other names, also 'paraffin oil', and that paragraph 1733 designates paraffin oil *eo nomine* as duty-free.

"The firm of the writer had the privilege of litigating this case through their attorneys, Walden & Webster, for the benefit of the importers and the manufacturing industry, but lost it before the U. S. Customs Court. This Court upheld the ruling of the Department in a decision two to one, the one judge dissenting holding that the oil used as a laxative, by a purely physical effect, is more specifically described by Congress by the expression 'all distillates obtained from petroleum, including paraffin oil,' than as a medicinal preparation. Judge Brown in this opinion said:

> "The majority holding breaks up a long-established administrative practice in the light of which Congress reenacted paragraph 1733. It flies in the teeth of one of the simplest and most elementary rules of statutory construction in customs and elsewhere, that the particular always controls over the general. The term "medicinal preparations" thus assumes an amusing and enormous bulk, and it destroys many narrow *en nomine* provisions elsewhere.
>
> The attempt to bolster the holding by referring to the testimony of witnesses who traded only in lubricating oils and *never bought or sold the imported article* is ludicrous in the extreme. That would be a monstrous way to concoct a commercial name for the article, if that is what is meant."

"The majority opinion was considered as not too well substantiated in that the reasons advanced in support of the conclusion reached fell short of supporting it. The opinion merely held that the oil is a medicinal preparation and thereupon affirmed the assessment of the collector. No attempt was made to answer the arguments advanced by the importers that, even if it was a medicinal preparation, it was nevertheless more specifically provided for in the free list.

"The importers particularly contended that the imported oil is 'paraffin oil' within the common or ordinary meaning of that term, as employed in paragraph 1733, and further that the term 'paraffin oil' has no commercial meaning differing from its common or ordinary meaning.

"They further maintained and proved that the legislative and judicial history of the provisions for petroleum products (paragraph 1733) and the long continued administrative practice in conformity therewith, clearly indicate the Congressional intent that paraffin oil should be classified thereunder. Another important point was that the provision for 'all distillates obtained from petroleum,' including . . . 'paraffin oil' is more specific than the catch-all provision for 'medicinal preparations' in paragraph 5.

"The U. S. Court of Customs and Patent Appeals, upon appeal of the importers, decided in their favor, taking the attitude that the legislative intent is the lodestar of judicial decision, and the various rules of interpretation adopted by the Courts are adopted for the purpose of arriving at this intent. The imported article should be duty-free under the provisions of paragraph 1733 rather than dutiable under the provisions for medicinal preparations, and the doctrine of legislative adoption of administrative practice and judicial interpretation, one or both, were held controlling in the case at bar.

"These two points being clearly established, the Appellate Court saw no occasion for any discussion of other rules of interpretation, or of other doctrines, since there was no occasion for their application here. For this reason it unanimously reversed the decision of the lower court.

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Matches to perfection the delicate fragrance of the Heliotrope blossom. It is four times as strong as Heliotropine and affords a distinct saving. It is an excellent fixative and has no chemical odor.

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Noxzema Has Best Year

George A. Bunting, president, Noxzema Chemical Co., Baltimore, in his annual report to stockholders of the company stated, in part, as follows:

"Your company has just emerged from the most successful year in its history, having exceeded the million dollar mark by a handsome margin.

"The net income as reflected by the accompanying report, amounted to $249,734.40. This compares with $154,520.55 for the year ended Dec. 31, 1933.

"Provisions have been made, out of current earnings, for doubtful acconnts receivable, Federal income and capital stock taxes, and discounts and allowances.

G. A. BUNTING

"You will note a definite improvement in collections during the year, which is evidenced by the fine cash position of your company resulting from increased volume and decreased accounts receivable.

"Compared with 1933 you will note a 24% increase in sales and 61% increase in net profits. The net earnings for 1934 amounted to $6.29 per share, while for the previous year they were $3.92.

"Good will, formerly carried at $150,000, has been charged off against earned surplus and set up at the nominal value of $1.00.

"These profits have resulted from the increased volume of sales and greater efficiency in production, administration, advertising and selling.

"In fact, personnel, salaries, wages and the contents of the jars have all been increased."

Colgate Earnings Up Sharply

An increase of $3,370,717 in the net earnings of the Colgate-Palmolive-Peet Company in 1934 compared with the previous year, is reported by S. Bayard Colgate, president of the company, in a letter to stockholders.

Net earnings of the company in 1934 amounted to $3,744,106, approximately ten times the sum earned in 1933, when the net totaled $373,389. This gain in profits was made despite an increase of only 15 per cent in the net sales of the company and in the face of the Federal coconut oil tax which increased manufacturing costs.

Total net sales in 1934 amounted to $71,968,612, compared with $62,313,660 the previous year. After deduction of all charges, there was left available $3,744,106 for dividends, equal to $1.16 per share on common.

P. D. Earnings Up

Parke, Davis & Co., in their annual report for the year 1934, show net profits of $8,719,368, equivalent after depreciation. Federal taxes and other charges, to $1.80 a share, compared with $6,902,683, or $1.41 a share in 1933. The consolidated balance sheet of assets and liabilities shows a total of $43,037,141.14.

Monsanto Earns More

Total earnings of the Monsanto Chemical Co. for 1934, including its proportion of the undivided profits of controlled companies not consolidated, and uncontrolled companies, were $2,771,629.29 or $3.20½ a share on the 864,000 shares outstanding, according to Edgar M. Queeny, president. Of the total earnings, $2,638,040.17 or $3.05 a share resulted from operations of the parent and wholly owned subsidiary companies. Earnings for 1933, after giving effect to the 100% stock distribution of last April, amounted to $2.57 a share.

Abbott Lab. Earnings Almost Double

Abbott Laboratories, North Chicago, has declared the regular dividend of 50 cents a share and an extra cash dividend of 25 cents a share, payable April 1 to stockholders of record March 18.

Net earnings for the year 1934 were announced as $896,959.33 after federal income taxes, or $6.18 per share, as compared with $549,577.97 or $3.79 per share in 1933, on the same number of shares outstanding.

In a letter to the stockholders announcing the Annual Meeting, to be held March 7, S. DeWitt Clough, president, stated that 1934 was the best year in the history of the Abbott Laboratories, both in volume of sales and net profits.

Obituaries

Christian Beilstein

Christian Beilstein, formerly first vice-president of the Dodge & Olcott Co., New York, died February 10. He was about sixty-seven years of age.

He retired from the essential oils business in March, 1926, after thirty-five years of service. His business career began with Lazell, March & Gardiner, perfumers. He entered the employ of Dodge & Olcott on July 13, 1891. When the company was incorporated on January 1, 1905, he was elected secretary, which position he held until January, 1918, at which time he was made first vice-president of the corporation. He continued in that office until retired from active business.

Ralph H. Aronson

Ralph Harris Aronson, vice-president and general manager of the Bourjois Co., New York, died February 27, in Orange Memorial Hospital, Orange, N. J. of pneumonia following an operation. He had been ill a week.

He was born in Boston forty-six years ago. In the World War he served as a captain of ordnance in this country and overseas. After the armistice he joined

RALPH H. ARONSON

the Great Atlantic and Pacific Tea Co. in an engineering capacity. Later he was successively vice-president and general manager of Vivaudou, Inc., and president of Woolworth, Inc.

He was chairman of the Code Authority for the perfume and cosmetic industry, and was a member of the committee of the toilet-goods industry. His clubs included the Harvard of New York, Harvard of New Jersey, Advertising Club of New York, Canoe Brook Country and the Empire State Club.

Dr. Charles H. Peet

Dr. Charles H. Peet, of the Rohm & Haas Company, manufacturer of chemicals and insecticides, Philadelphia, and a resident of Bristol, Pa., died unexpectedly February 27 in a hospital in this city, following a cerebral hemorrhage sustained while attending a meeting of officers of the National Association of Insecticide and Disinfectant Manufacturers here. He was forty-two years old.

Cyrus C. Libby

Cyrus C. Libby, treasurer of the J. E. Goold Co., Portland, Me., died February 9 at his home in that city after several months' illness. He was a stockholder and official of the company for many years.

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CREAMS and OINTMENTS

simply *add water* and *mix*

We take pride in presenting for your consideration two new cream and ointment bases which are unique in that they are *complete* bases, needing only emulsification with water to produce creams of superior quality.

We have named these unusual bases, ALMECERIN (for fatty creams) and CEFATIN (for non-fatty creams). Both are free from alkalies and absolutely non-irritating. Both make excellent vehicles for carrying therapeutic and cosmetic ingredients since they in no way interfere with the active, valuable properties of such ingredients.

Write for samples and for our valuable booklet which describes how the manufacture of creams and ointments may be simplified and improved through the use of these unique bases.

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INDUSTRY'S BOOKS

A Text-Book of Pharmacognosy, by George Edward Trease, 653 pages, William Wood & Co., Baltimore, $6.00 net.

This is one of the most valuable and complete discussions of pharmacognosy which we have ever seen. It should be a valued possession for any chemist particularly interested in crude drugs and in any phase of their use and extraction. In addition to the technical material there is considerable of interest from the more general viewpoint, such as the discussions on hormones, vitamins, enzymes, the collection and storage of drugs, plant principles and their extraction, and various methods of drug identification.

Tuberculosis, by Fred G. Holmes, 312 pages, D. Appleton-Century Co., New York, $2.00 net.

This is the latest and most comprehensive work on this subject. It discusses fully modern methods of treatment and clearly points out the changes in treatment which have been made during the last few years. A section is also given over to a historical discussion of types of treatment since this disease was first identified.

French Medicine, by M. Laignel-Lavastine and M. Raymond Molinery, 187 pages, Paul B. Hoeber, Inc., New York, $2.50 net.

Another of the series which under the title of "Clio Medica" aims at presenting in a concise and readable form a number of special phases of medical history. This particular volume presents the history of French medicine in compact, connected, convincing and reasonably complete form, so that it should interest the layman as well as the student or doctor, who is interested in the development of medicine.

Diseases of the Skin, by Jay Frank Schamberg and Carroll S. Wright, 331 pages, P. Blakiston's Son & Co., Philadelphia.

This is the ninth edition of this well-known compendium of diseases of the skin. After a brief, but clear and comprehensive discussion of the anatomy of the skin, the book takes up the various diseases in lucid and readable form. It is an excellent reference work and key to the subject of dermatology. Especial attention has been paid to treatment of the more important skin affections and, in this recent edition, the entire subject matter is brought up to date.

Flavoring Products, by Alfred Wagner, published by Theodor Steinkopf, Dresden and Leipzig, Price, 20 RM.

The rapidly developing field of aromatic and flavoring products is exhaustively treated from the practical and technical points of view in this work by a known expert. Beginning with primary materials, the fundamentals and practise of flavoring materials are thoroughly discussed and number of recipes are tabulated. Of special interest are about 200 perfume materials, classified by taste and odor for the first time, and generally unknown. Wagner also describes the technical production of coffee, tea, cocoa, honey, wax, butter, tobacco, etc., aromas. The book should be of use to all interested in improving the production of flavoring materials and condiments.

The Popular Practice of Fraud, by T. Swann Harding, 376 pages, Longmans, Green & Co., New York, $2.50 net.

Our favorite debunker and iconoclast is at it again. T. Swann Harding is no stranger to most of this industry and his books are unfailingly entertaining although he lays on all about him, sparing nobody, with the possible exception of the Government officials. Drugs, cosmetics, Consumers' Research, and advertising generally, are all panned with a liberal hand. Yet he does it so indulgently and so humorously that even those at whom he strikes can hardly help but enjoy it. One of those singled out for praise is the Squibb company for its advertising against self-medication which was commented upon in our own pages editorially some time ago. Those who know Mr. Harding know of his strenuous efforts to defend government control, so they will take this into account when reading his latest work. But read it by all means for you cannot help but enjoy it, for Mr. Harding's presentation of material is always clever and entertaining.

Permanent Wave Burns, by Noble M. Eberhart, 64 pages, New Medicine Publishing Co., Chicago.

In this volume, Dr. Eberhart discusses permanent wave burns generally and then goes on to advocate treatment with Triphenylmethylamine (gentian violet) which he believes to be very desirable in treating burns of this nature.

Marketing Industrial Equipment, by Bernard Lester, 307 pages, McGraw-Hill Book Co., New York, $3.50 net.

This book is rather unusual in that it is the first of its kind to treat the problems involved in selling industrial equipment. As a basis it outlines the economic factors regarding the use of equipment and the development of the industrial equipment industry. It discusses the various methods of analyzing the market to increase sales by developing new uses for standard equipment. In addition to this there are chapters concerning methods of contacting the trade, sales promotion, servicing and advertising.

It is the first book devoted to a comprehensive study of the problems involved in distributing machinery and equipment from the manufacturer to the ultimate user. It deals specifically with methods of market and product analysis, principles involved in economic distribution, and the organization and operation of the sales department and sales outlets.

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400 pages of practical, usable information for the manufacturer of cosmetics. Over 500 formulas and procedure of manufacture for everything in the cosmetic line.

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Herman Goodman, B.S., M.D.

In this volume is given in full detail the anatomy of skin, hair and nails. Any of the formulas given can be adapted by cosmetic manufacturers as a marketable corrective preparation.

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Compilation of about 15,000 selected recipes and processes.

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Prepared by Authority of the American Pharmaceutical Association.

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COSMETICS, T. Koller

A handbook of the manufacture, employment and testing of all cosmetic materials and cosmetic specialties.

269 Pages $3.50

THE PREPARATION OF PERFUMES AND COSMETICS, J. P. Durvelle

Translated from the Fourth French Edition by Ernest J. Parry.

427 Pages, Cloth $8.00

A SYNOPSIS OF THE U. S. PHARMACOPOEIA AND NATIONAL FORMULARY, H. J. Fuller

The purpose of this book is to satisfy a long-felt need for a treatise of the Official Preparations in a concise form for the study of the Latin Titles, English Titles, Synonyms, Composition, Method of Preparation, Strength and Dose, arranged as to class of preparation.

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THERAPEUTICS, MATERIA MEDICA AND PHARMACY, R. J. E. Scott

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The Drug and Cosmetic Industry

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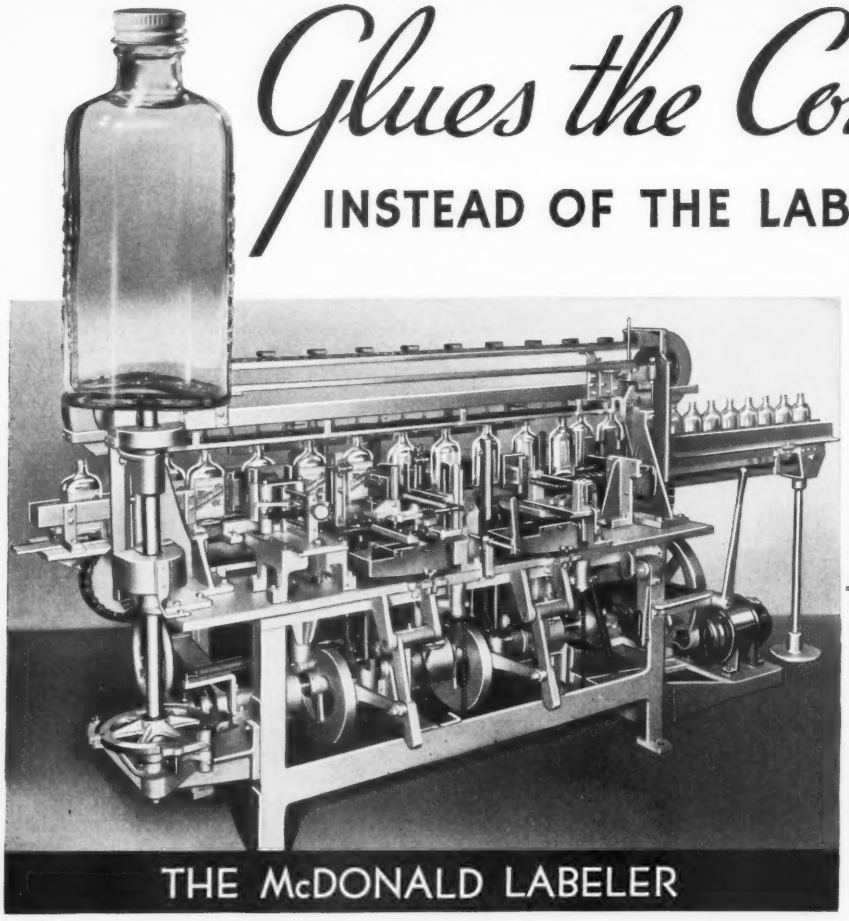
Glues the Container

INSTEAD OF THE LABEL



THE McDONALD LABELER

NO TROUBLESOME
Label Picker Mechanism

The McDonald Labeler applies the glue directly to the container. This exclusive feature guarantees perfect register, a tight, flat label, free from wrinkles and dry spots.

See the McDonald Labeler, combined Vacuum Cleaner-Filler and the Single Head Capper at the National Wine & Liquor Show, Hotel Stevens, Chicago. Booths 144-145-146.

Its direct straight-line PRINCIPLE
means smoother, trouble-free operation

Watch a McDonald Labeler in action and you will be impressed by this fact. The machine does not appear to be hurrying, yet it delivers perfectly labeled containers with speedy regularity.

The reason for this impression and the outstanding success of McDonald labeling is the fact that the machine does not have to do too much at once. It makes haste slowly. By correct straight-line design ample time is allowed for each operation to be performed separately. And because of the exclusive McDonald principle of applying the label direct to the bottle, labels are always accurately registered, cleanly applied.

McDonald machines apply front only or front and back labels, halfway around or all-around labels, double-end labels or seals to bottles, jars, cans, cartons, boxes or packages. They offer greater flexibility than any other method. It costs you nothing to get our recommendations and facts on the McDonald best suited for your production. Write today.

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LOWER COST per Container

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Carton Feeders—Bottom Sealers—Lining Machines—Weighing Machines (Net and Gross)—Top Sealers—Tight Wrapping Machines—Capping Machines—Labeling Machines—Vacuum Cleaning and Filling Machines (for liquids or semi-liquids)—Tea Ball Machines—Box Making Machines

Bottling Equipment

PRODUCTION FORUM

By Francis Chilson
Production Engineer

SCIENTIFIC BATCH MIXER

The C. O. Bartlett and Snow Company 6200 Harvard Avenue, Cleveland, Ohio, is offering the Lancaster mixer, a machine that is said to bring scientific principles of the batch mixing of enamels, various pharmaceuticals and other mixes of dry or plastic consistency.

A unique feature of the design is the revolving pan that carries the ingredients to the mixing area where one or more assemblies of plows or plows and mullers, whirling in counter direction produces a thorough and homogeneous mix. From the mixing area, the materials are passed outward; they are then turned with side plows and scrapers and carried back into the mixing area by the revolving pan in a continuous cycle. "Dead Spots" are eliminated. Every portion of the batch is subjected to the action of the mixing units with every revolution of the pan.

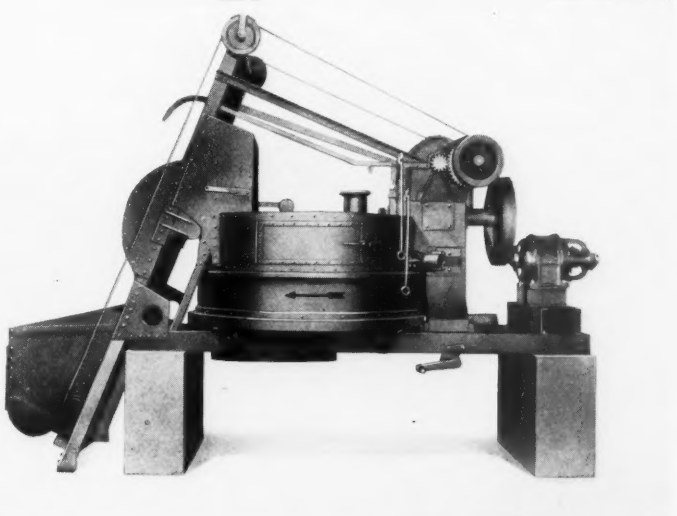
From the number of machines already in operation, it appears that a uniform mix of all the ingredients is secured.

Mixing time is greatly reduced. It is claimed that identical batches that require 5, 10 or even 20 minutes of continual mixing in contemporary equipment, can be loaded, mixed and discharged from the Lancaster mixer in from 3 to 5 minutes without impairing the quality or the character of the finished mix The company reports that a considerably greater tonnage of material can be handled in a Lancaster unit in a given period of time, with corresponding savings in the amount of equipment required and the cost of operating it.

Lancaster mixers are ideally adapted for the solution of a wide variety of mixing problems. Different assemblies of plows, or plows and mullers are used, depending upon the materials being handled and other conditions to be met.

Open and closed types of Lancaster mixers are included in the standard line. The former are admirably suited for mixing the heavier bulk materials, especially when a considerable amount of water or other liquid is used in the formula.

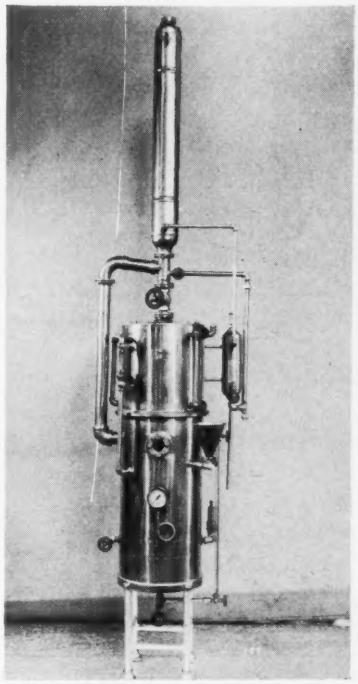
Lancaster mixers are available in seven standard sizes—2/3, 1¾, 5½, 9, 14, 18 and 36 cubic foot capacities, in either open or closed types, with or without loading hoppers.



NEW LARGE SCALE SOXHLET EXTRACTOR

A new Soxhlet Extractor in suitable sizes for either commercial or laboratory service has been announced by the Barnstead Still & Sterilizer Company, Inc., of Forest Hills, Boston, Mass. This equipment provides an economic means of continuously extracting, percolate, oils, greases, etc. from either solids or semi-solids by means of solvents; and then automatically recovering both the oil or extract and the solvent in a pure state.

Essentially this equipment is a combination extractor and recovery still. It consists of, first, an evaporating chamber that may be heated by steam, gas or electricity; and, second, an extractor chamber in which are trays for carrying the raw material, such as livers, fats, crude drugs, etc., that are to be extracted. Above the extractor is a reflux condenser,



that condenses the solvent and throws it back hot into the extracting chamber. The equipment also includes an auxiliary cooler, to permit cooling of the solvent, just prior to recovery in the final stage.

Barnstead Soxhlet extractors are finding their greatest application food product, and pharmaceutical plants, biological laboratories, etc. Full details on extractors of this nature to fit your particular requirements may be obtained by writing to the manufacturers.

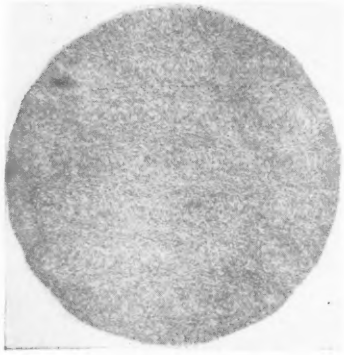
U. S. STONEWARE ANNOUNCES

"Flexlock" is the name of a rubber joint for stoneware piping just introduced by this company. The use of this material permits joining of pipe sections of the bell-and-spigot type. Flexlocks consist of

HOMOGENIZED MILK OF MAGNESIA *MEANS* INCREASED SALES

These microphotographs (made by a famous pharmaceutical manufacturer) show the texture of milk of magnesia samples made by different processes and with different equipment. Homogenizing makes milk of magnesia *more quickly assimilable by the body.*

THE CUSTOMER CAN TELL THE DIFFERENCE between ordinary and Homogenized Milk of Magnesia . . . . SMOOTHER . . TASTES BETTER



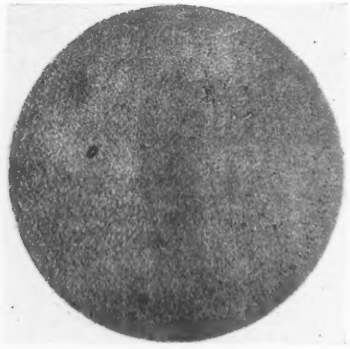
Notice how fine and uniform is this sample of Milk of Magnesia made with a Manton-Gaulin Two-Stage Homogenizer . . . IT REMAINS STABLE!

Homogenized Milk of Magnesia made with the Manton-Gaulin Two-Stage Homogenzier. (Leading Brand) . . . STABLE . . . VELVETY . . . UNIFORM

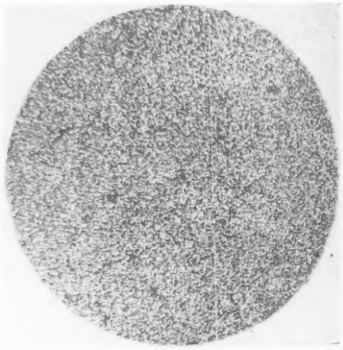
COMPARE!

Send samples of your product to

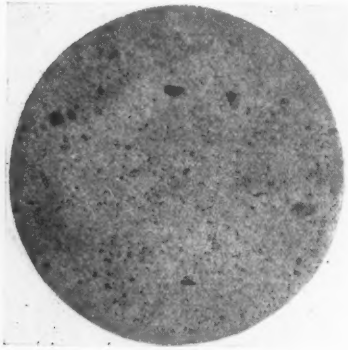
The **MANTON-GAULIN**
MANUFACTURING CO., Inc.
EVERETT, MASS.



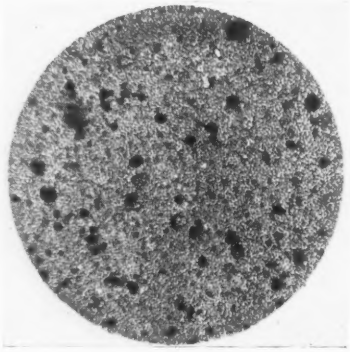
Sample from one type colloid mill (not uniform)



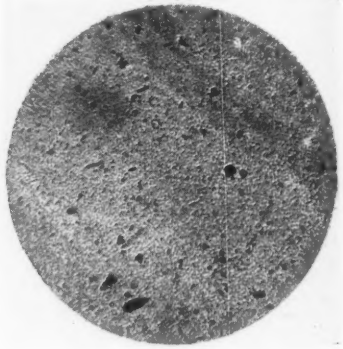
Made by precipitation (uniform but coarse)



Sample from another colloid mill (gritty)



Unprocessed Hydrated Magnesia (gritty)



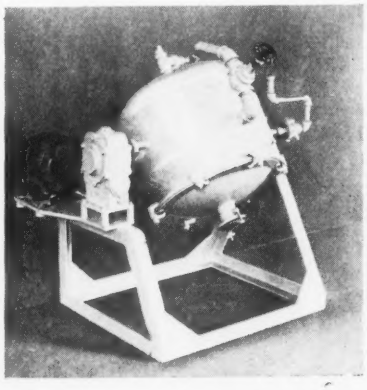
Unprocessed sample (gritty)

ridged rubber sections which in practise are placed in the open end of bell section of the pipe. The plain end is just shoved in, the operation requiring no tools. We can testify that all hell won't pull them apart. Inasmuch as the joint is concealed the material going through the pipe never touches it. For this reason the joints have been used for nitric and sulfuric acid lines without damage. An interesting feature is that although these joints are absolutely pressure and vacuum tight, they are flexible and will absorb vibration transmitted by pumps and operating equipment.

The same company has also expanded its line of laboratory stoneware to include square and half round, closed and open end drain troughs for laboratory work. In Bulletin 403 the company describes its complete line of portable and stationary tanks, kettles, stills, mixers, pipes, valves fittings and special process equipment. The address is 50 Church St., N. Y. C.

PFAUDLER'S G. I. TUMBLING TANK

Herb Hanson of the Pfaudler Company sent us the accompanying photograph of a tumbling tank mixer. This machine is of course glass lined and agitates its contents without entrainment of air by



tumbling the batch over and over like a barrel churn. Herb says a number of them are in operation for dissolving operations such as the manufacture of lotions and medicines where vapor loss must be prevented. People like this type of mixer because they are so easy to clean and dump and because they give a thorough mix.

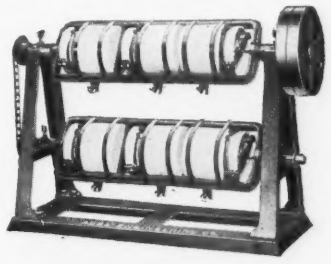
LABORATORY PUMP

The H. B. Manufacturing Co., Cleveland, announces a handy lab. pump. The PRESTO is made to fit pint, quart or gallon cans, and to deliver either ½ oz. or 1 oz. with each complete stroke of the pump plunger. The photograph shows the PRESTO inserted in the quart oblong can, while beside it is the gallon size PRESTO pump alone. The PRESTO fits into the can and being equipped with a screw cap allows it to screw onto the can taking place of the regular can cap. The PRESTO is absolutely positive in its action and accurate, and is so constructed that it cannot leak even though the can is laid on its side or placed in an inverted position. The PRESTO is said to be ideal for filling bottles of small capacity. The Liquid by being placed in the can is pumped out in

measured quantities and the job of filling the bottles is done very quickly and without any muss or fuss. It is ideal for the small packer. The PRESTO is all brass and the workmanship is high grade throughout.

ABBE SHORT-CUTS

"Face powder at any speed you wish" is the new Abbe slogan. Whether you want equipment for a hundred pounds or a ton a day, Hank Kleinfeldt and Art Beach, the powder twins of the Abbe company will give it to you. Realizing that many manufacturers wanted rapid output without big investment in large size units of equipment, Hank and Art have been going around the trade showing the boys how to get it. They reported many cases where manufacturers were using expensive extended colors to save milling time. They also found that many powder makers were not using high speed mills because they had to have a mixer anyway to give the ingredients a pre-



liminary mix before running them through a pulverizer. So the first step was to provide a high speed pulverizer with a mixing hopper attached to it and functioning as an integral part of the machine. This resulted in the development of a combination mixer-mill, which sells, so we understand, for less than seven hundred dollars complete. The output of the unit is said to be more than five hundred pounds per

hour. While this machine speeded up making the finished product tremendously, it didn't make any provision for grinding color bases, unless the straight color was thrown in with the rest of the mix. So then they installed in one plant a multiple jar mill for grinding color and perfume base. The advantage of this machine is that color bases for several different shades can be prepared simultaneously. A recent installation includes a multiple jar mill for color and perfume bases, a mixer-mill for making the powder and their new direct motor driven turbine sifter. An interesting feature is that the whole layout didn't cost as much as some of the larger sized pulverizers. The set up is very flexible because color and perfume base is always available and the unit can be switched over from one to the other very quickly.

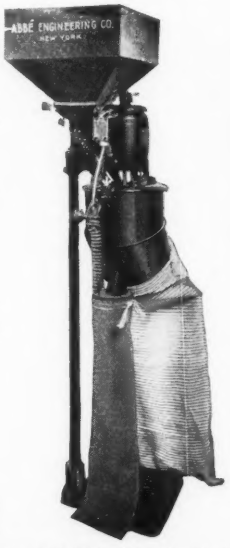
Abbe also announces that the Abbe Turbine Sifter is now available as a direct motor driven unit and also that it will shortly be obtainable in a medium size. Many manufacturers found that the capacity of the Abbe Midget Sifter was not quite great enough, and that the capacity of the big Turbine was too great, so Abbe is going to provide an in-between model at an in-between price.

LITERATURE

L. O. KOVEN & BROTHER INC., JERSEY CITY has sent us one of the most interesting catalogues we've seen in a long time. What makes this appeal to us is that a large part of the Koven output

SAVINGS IN *Speedy* SIFTING!

TEN MORE **BIG** *MANUFACTURERS BOUGHT* ABBÉ BLUTERGESS TURBINE SIFTERS *during the last month and scrapped their old equipment.*



WHY?

1. Because Abbé Sifters are the FASTEST, LEAST EXPENSIVE and MOST EFFICIENT Sifters in existence.
2. They are dustless in operation.
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4. They do not clog even with sticky powders.
5. They require very little floor space.
6. They feed themselves automatically.
7. They can be used for any powder: face, talcum, baby, dental, shaving and soap powders; powdered gums and powdered drug extracts.

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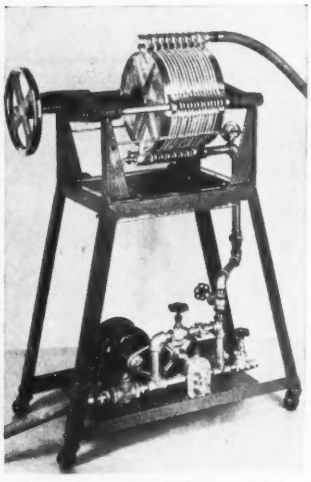
ERTEL LIQUID HANDLING EQUIPMENT



Fourteen Disk Wheel Type Filter

At left is our Fourteen Disk Wheel Type Filter, just one of the many sizes we manufacture. With the use of the Ertel filter and filter sheets, you will give your liquids a polish heretofore not dreamed of. Send us a gallon of your liquid and let us prove to you what our filters will do.

Ertel Portable Mixers, direct driven or back geared, furnished in all sizes and for any purpose. Scientifically designed, accurately balanced, they are light, easy to handle and are always ready for instant service. Note the handy grip on illustration at right, an exclusive feature of the Ertel Mixer, which makes it truly portable.

Back Geared Mixer—furnished with acid resisting Monel or Stainless Steel shaft and propellers.

MANUFACTURERS OF
Ertel Asbestos Disk Filters, Ertel Asbestos Filter Sheets, Allegheny Stainless Steel Tanks, Portable Bottle Fillers, Glass-Lined Tanks, Portable Mixers, Pumps and Other Liquid Handling Equipment.

ERTEL ENGINEERING CORP.

120 EAST 16TH STREET, NEW YORK, N. Y.

consists of specially designed equipment. The book is full of mixers, tanks, kettles, stills, condensers, hoppers, dryers, evaporating apparatus, conveyors, etc. of almost every kind of metal and in many unusual shapes. Koven seems to have lent a hand to every industry and we think you'll find this catalog worth reading.

ROBINSON MFG. CO., MUNCY, PA. has just sent us a new catalog on mixers, which lists about every kind of dry mixer we've heard of. Included are horizontal mixers for face powder and tablet granulations, chemicals, etc., continuous mixers, barrel mixers, revolving mixers, prism mixers, single mixers, double mixers, triple mixers. We'd almost forgotten there are also liquid mixers of several types, soap crutchers, steam jacketed mixers, etc.

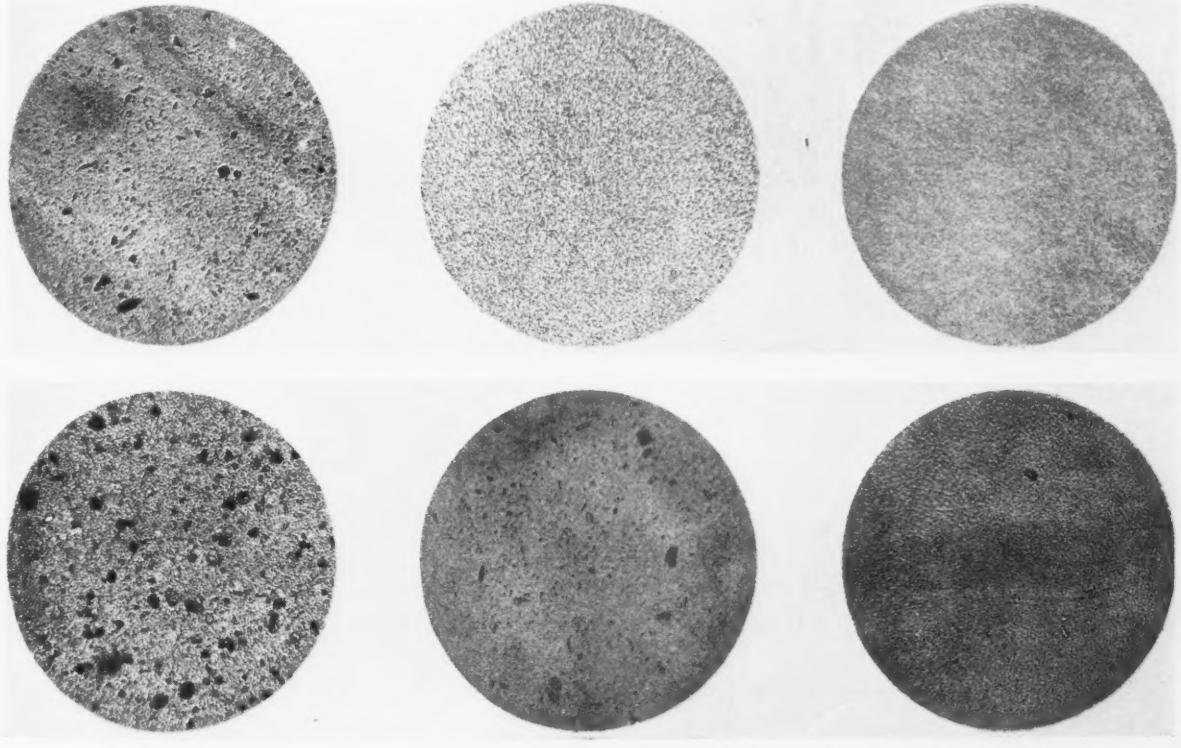
NEW PORTABLE CAPPER

The production of a new low-price portable capping machine has been announced by The Ludcke Corporation, 41 North Beacon Street, Watertown, Massachusetts. This new capper, called the KINEX, is said to be the only portable unit on the market capable of tightening screw closures of all types, shapes and sizes from 10 m/m to 90 m/m; and if necessary, closures can be put on tighter than is consistently possible with high hand tightening. The manufacturers report a tremendous interest on the part of drug and cosmetic manufacturers in this new unit, because it is swiftly adaptable to all types of drug or cosmetic packaging. The machine can be used for tray or conveyor belt operation and it tightens caps at a speed up to 100 per minute. Selling at a new low price, this portable machine appears to be particularly attractive to both large and small packagers. Further information is available on request to the manufacturers.

MILK OF MAGNESIA

You are all familiar with the two principal ways of making milk of magnesia: double decomposition and colloidal suspension. The former is the ex-official method, the latter perhaps is the method most generally employed. This method requires a colloid mill or a homogenizer. The ingredients are given a preliminary mix and are put through a colloid mill, which breaks down the solid particles to such a fine state of subdivision that a more or less stable suspension is formed.

The homogenizer is making rapid strides in this field for manufacturers are discovering that with such a machine they can, not only make a finer and more stable product, but that they can also make it faster. To show what progress has been made and to illustrate graphically the effect on final particle size of the various manufacturing methods, we are pleased to publish the results of a study of the subject made by a very large detroit pharmaceutical house. In this study milk of magnesia was made by the D/D process, by the colloid mill method and also by the homogenizer method. The accompanying micro-photographs reveal the results so graphically that it is hardly necessary to say anything about them. One of the micro-photographs shows hydrated, unprocessed magnesia. Particles are coarse and lacking in uniformity. Another shows how the material looked after having been run through a certain type of colloid mill. This is much more uniform but still there are a considerable number of coarse particles. The third sample was run through a different type of colloid mill, which, as the micro-photographs show, was still more uniform, but coarse irregular particles are in evidence nevertheless. The fourth sample was made by the double decomposition method. This one is uniform but coarse. The homogenized sample is absolutely uniform and much finer as to particle size than any other. The results of this work confirms the experience of makers of other famous brands, milk of magnesia, regardless of how it is made beforehand, is much more uniform and a lot more stable when homogenized. A number of manufacturers who use the double decomposition method finish off their products in a homogenizer.



Upper and lower pictures at the extreme left show two gritty unprocessed hydrated magnesia. Center of upper shows the uniformity but coarseness of double decomposition milk of magnesia. Center of lower row shows grittiness of sample from one colloid mill, while right of lower row shows non-uniformity of sample from another colloid mill. Upper right shows smoothness and uniformity of product made with homogenizer.

ROSS

COMBINED SIFTER, BLENDER and MIXER

For Sifting, Mixing and Blending

FACE POWDER, DRY ROUGE, BATH SALTS, MEDICINAL POWDERS, CRUDE DRUGS, ETC.

This machine can be furnished with steam jacketed trough or with a steam jet for making Pastes, Liquid Face Powders, etc.

Made in capacities of from 20 lbs. to 500 lbs. per charge.

Can be supplied with any mesh sieve desired.

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Made of "U.S. Corrosion-proof Stoneware"
No Evaporation, No Product Loss, No Air Incorporation

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CAPACITIES 10 TO 75 GALLONS

They Last Forever

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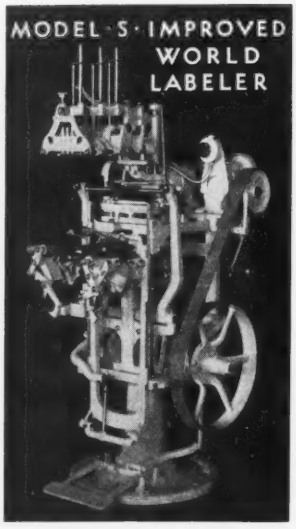

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WORCESTER, MASS.
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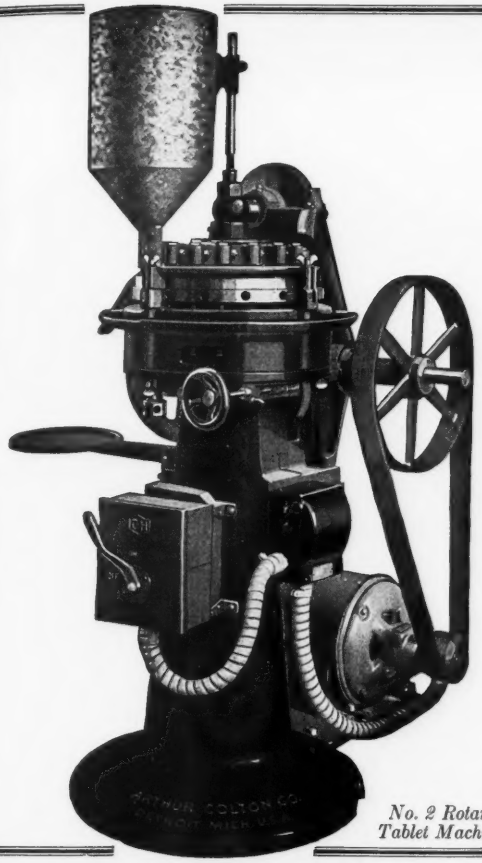


No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

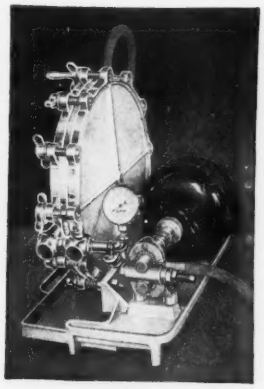
2620 East Jefferson Ave.

Detroit, Michigan

Hy-Speed

Labor Saving Units

for lower production costs



FILTERS

MIXERS

FILLERS

The time and labor saving features of the modernized HY-SPEED machines will lower your mixing, filtering and filling costs. In addition, their reputation for producing superior products is well-established throughout the drug and perfume trade.

Write for complete catalogue

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8—80-qt. Reed, Hobart, Century Mixers.
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1—Karl Kiefer 5-spout tray-type Vacuum Filler.
Dry Powder Mixers, 100 to 4000 lbs.
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New high-speed and back-geared Portable Agitators.
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Tablet Machines—Colton 3B, single punch; Mulford single punch; Stokes Eureka hand; Stokes Rotary "B;" Stokes "M" single.
Copper and Aluminum steam-jacketed Kettles, 25 to 300 gallons.
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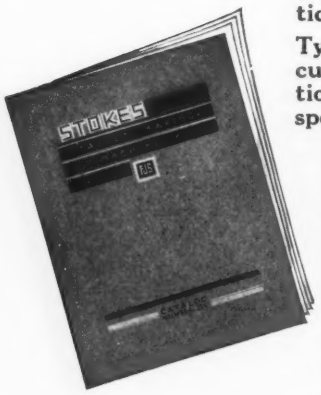

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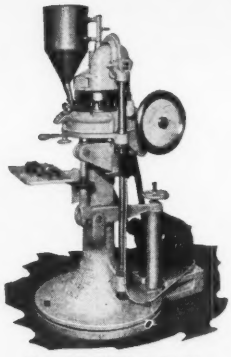

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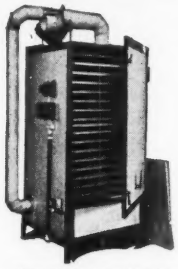

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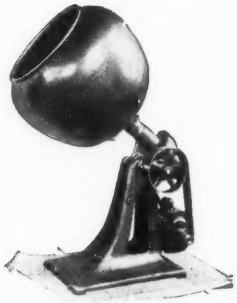

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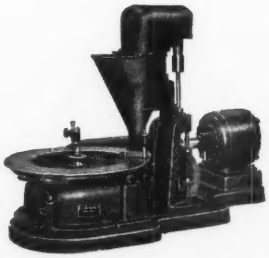

New STOKES Capsule Filler 46-D

New STOKES One Gallon Laboratory Water Still, No. 171

PERFUMERS' SHELF

Pine Scents

The increasing popularity of pine scents has gained considerably over the past year due mainly to the increased use of bath salts and other bath preparations. Its introduction can be attributed mainly to the Swedish masseurs who have always contended that Swedish pine needle oil was a valuable adjunct to their baths and massage creams. However, the limited supply of this oil has led to the use of the Siberian pine needle oil as well as derivatives such as bornyl acetate, borneol and iso-bornyl acetate. To American perfumers must be given a large portion of the credit for the development of new and varied shades, and if one will examine any of the many popular priced products on sale, he will agree that in nearly all cases the perfuming of these products has been extremely well done.

The cost of making a pine scent is very reasonable since all of the ingredients used are of moderate price. But where variations are required, the cost must be increased slightly. Of prime importance in making an odor of this kind is a fine quality Siberian pine needle oil. But it is not advisable to use this alone since the odor will not predominate as long in the product, nor will it be as fine and as delicate as when the oil is compounded.

Borneol is rather harsh and camphoraceous as is its isomer, and it is recommended that its use be limited to cleaning compounds, sprays, and para-block odors. Bornyl acetate, however, is more delicate, and since it is a natural constituent of pine needle oil, it is a valuable addition. It is also said to be about fourteen times stronger in odor value than the oil itself, and it is very stable. Iso-bornyl acetate is also of importance and is somewhat softer in odor value, making it more desirable for cream preparations.

Small amounts of cedarwood oil and balsam of fir, Canada, added to the mixture assist in giving added fixative qualities.

We have now considered the materials which have a resemblance to the odor of pine itself, and it is now necessary to round off the odor and make it more pleasing the sense of smell. The addition of musk ambrette produces a decided improvement, and an excellent variation can be obtained by introducing either ylang ylang Bourbon, or Madagascar together with a small amount of an artificial violet and rose. Strange to say, the above mentioned products do not vary the pine odor to any marked degree, the only object of their use being to modify and soften the finished product. Their use is prohibitive in sanitary preparations where a pine odor is required, but in this capacity pine oil steam distilled is most commonly used because of its strong antiseptic value.

The use of pine odors to date has been limited to creams, shaving creams, bath preparations, and sanitary supplies, and it is extremely doubtful whether there will be any new application for this type of odor in the future except in the commercial deodorant field where the possibilities are unlimited.

Esters of Propionic Acid in Perfumery

It is an interesting fact that the propionates found in natural oils are only derived from the lower aliphatic alcohols, these esters have a fruity aroma and taste and accordingly find wider application in flavoring essences than they do in perfumery. Although the propionates of aromatic and terpene alcohols are not found in nature many of them possess characteristic odors which makes their use interesting and valuable in perfume compositions.

Heptyl Propionate has an odor remotely resembling phenyl or cinnamyl propionate, but differing from them by its more waxy dominating note and suitable therefore to be used in rose perfumes.

Octyl Propionate. Its odor is distinctly fungus but yet somewhat fruity. Interesting effects can be obtained with it in flowery odors, as in jonquil, reseda, etc.

Nonyl Propionate has an odor similar to the foregoing but its character is somewhat less rutaceous and it has more of the waxy odor that is desirable in rose compositions.

Lauryl or *Duodecyl Propionate* possesses a pronounced fungus odor and without doubt can be used for securing new and original odor effects.

Citronellyl Propionate has a sweet, pronounced fruity rose odor and is especially suitable in honey-suckle and rose compositions. It is also useful in fruit essences.

Geranyl Propionate is thought to occur in oil of lavender. Its odor is sweet and pleasant and reminds one of grape blossoms. Some commercial products have a disturbing earthy nuance which may be traced to the use of an impure geraniol in the preparation of this ester. The character of the odor of the pure ester makes it very useful in numerous compositions, such as lily of the valley, rose, lavender and bergamot. It is especially suitable in oils for perfuming brilliantines on account of its solubility in mineral oils.

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THE COMPOUNDERS' CORNER

Facial Packs

Among powdered materials for manufacture of facial packs may first be mentioned mucilaginous and aromatic drugs. Mucilage-containing drugs are of two types, namely those containing albuminous substances and those containing polysaccharides. The first group contains almond meal and legume meals such as pea and bean meal, while the second group includes rice, wheat and potato starch, marshmallow root, tragacanth and powdered gum arabic. Aromatic drugs comprise myrrh, olibanum, fennel, rose leaves, orris root as well as melilot

Herb packs have come into recent favor. Coarsely powdered drugs are stirred with water to a pulp and this pulp is then heated in a suitable vessel just below boiling. Better still, the pulp is padded in a cloth and heated in a pan, water being sprinkled on the pad to prevent burning. These herbal packs are used to combat pallor and age lines in faces or in treating pimples and blackheads. By causing slight swelling of the skin they open the pores and permit easy removal of blemishes. This is another of the methods available for bringing blood nearer to the surface of the skin, partly through the irritating effect of the essential oils in the drugs, partly because of the application of heat. In addition, the treatment, by causing the albumin in the skin to swell, facilitates the removal of pimples and causes more serious infections to come to a head sooner. A few drugs customarily used are chamomile, rosemary leaves, thyme, pine needles, melilot, rose leaves, etc. Most drugs, as well as those just mentioned, contain tannins which have an astringent effect.

Modern facial packs do not only occur as creams; they are often sold as powder mixtures to be made into a paste with water directly before use. Herb pastes and herb powders belong in this group.

The oxygen pack is an achievement of modern cosmetic manufacture. It contains from 10 to 20% of sodium perborate mixed with borax and bolus alba. Before use the powder is made into a paste with acetic or citric acid and then applied to the face.

For treating oily skins by absorption of excess fat, bleaching or absorbing earths are used. These are the well-known complex silicates with high absorbing power that are used industrially for bleaching oils; Fuller's earth is an example.

Mud is also used in beauty treatment. The dried and powdered material is made into a paste with water and applied to the skin. The acids present are astringent in action and have an effect upon the tissues. The preparations are occasionally radioactive, but the radioactivity is not lasting. However, preparations emitting active radiations are unsafe in unskillful hands and are not to be recommended.

Stearate Creams

The so-called day or stearate creams belong to a small group of cosmetic preparations which have been recently developed and rapidly became popular. Their popularity is due to the fact that they give a dull finish to the skin, depending upon the character of the stearin. In the use of a stearate cream, unsaponified stearin in finely divided form is dispersed on the skin. In the usual method of preparation, half of the stearin is saponified, while the other half is emulsified unchanged by the stearate soap. This unsaponified stearin not only produces the desirable dull finish, but it also acts as an effective powder base for powder applied afterwards.

Although there is no particular trick to the preparation of stearate creams, they may occasionally cause difficulties for the inexperienced manufacturer. These arise when the temperatures are not watched closely enough, when heating is not properly done and when the mixture is stirred too much or too little. One of the worst annoyances is the formation of small lumps which appear in the potassium carbonate process.

There are three methods for the preparation of stearate creams. The potassium carbonate method is the first and most commonly used. With liberation of carbon dioxide, potassium stearate is formed. The reaction is apparently complicated and does not proceed smoothly because of the appearance of an "intermediate phase:" lumps form in parts of the batch that are in condition to favor their formation. The lumps may be removed by thinning the cream with water

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and then boiling until the desired consistency has been reached. In this way the emulsification of the unsaponified stearin is brought to completion. Incorrect advice has been given by several writers who suggest suspending the boiled hot cream in cold water; rapid cooling promotes rather than removes lack of uniformity. When the process is satisfactorily completed, the product is a fine, white stable cream.

The potassium hydroxide method is the simplest and is the one used in the largest factories. As contrasted with the carbonate process, this method operates smoothly without the annoyance of lump-formation in the finished cream.

The ammonia method leads to a very fine white cream, but the exact quantity of ammonia must be used. An excess remains in the cream for a long time and will interfere with its odor. Ammonium stearate gradually turns brown when exposed to air, so that earthenware jars may not be used for packing the cream. Packing in tubes avoids this particular difficulty.

Because of their ability to hold large quantities of water, stearate creams give a high profit margin, but the amount of water present must not be so great as to be noticeable to the consumer.

A disadvantage of this type of cream lies in the fact that the skin may feel rough after the application of stearates. To overcome this, creams are usually super-fatted. The new process is considerably more complicated than the old one since it becomes necessary to emulsify an additional quantity of fats and the stability of the oil-in-water emulsion is lessened. Satisfactory results are obtained, however, by careful and sufficient saponification, and the use of some of the newer emulsifying bases as superfatting agents.

Shampoos

After a period of use in shampoo mixtures, fatty alcohol sulfonates give indications of being unsatisfactory for that purpose, whatever their value in other applications. A few instances have already been reported of itching and inflammation of the scalp following the use of these preparations, but the complete dermatological study which will give the final decision has not yet been undertaken.

Fatty alcohol sulfonates are technical products of uneven composition. The product of the same manufacturer will occasionally vary in its pH value from 7 (neutral) down to pH 4 (contaminated with sulfuric acid). As no organic acids have been found in the mixture, acidity may always be considered as due to sulfuric acid. Fortunately, the sulfonates are always diluted with water when used so that the harmful effect of the acid is lessened.

Free sulfuric acid cannot, in general, be completely removed from hair by rinsing with water; the use of dilute solutions of alkalies is necessary to neutralize last traces of acid.

Even the entirely neutral sulfonate should not be used to clean living hair since it removes fats and oils far too completely. In addition to removing dirt and impurities, it emulsifies the protective coating of the hair, and leads to irritation. The sulfonate itself is absorbed by the degreased skin, and, being a foreign substance, may eventually cause trouble.

On the other hand, neither the skin nor the hair will absorb alkali salts of fatty acids. Irritation is caused only by free alkali arising from hydrolysis and this can be controlled by the selection of the right fatty raw materials. Irritation from excess alkali is generally due to the use of palm kernel oil or coconut oil or mixtures containing too large a proportion of these ingredients. Soaps like these have comparatively low-weight fatty acid molecules so that their hydrolysis leads to the formation of higher concentrations of alkali than will be obtained, for example, from a soap made from 75% tallow, 10% hog fat and 15% coconut oil. An aqueous solution of soap containing excessive alkali will affect the hydrogen ion concentration in the cell as well as remove the protective coating too thoroughly. Factors like these are not sufficiently known to cosmetic manufacturers.

Free alkali is just about as harmful to hair as is free sulfuric acid. Only a small proportion will be taken up by the hardening compounds in the water and made harmless. When hard water must be used in shampooing, the hair should be finally rinsed with dilute organic acid solutions such as formic, acetic, tartaric or citric acids to remove lime and magnesia soaps deposited on the hair. The acids are then completely removed by rinsing with water.

To be suitable for use in shampoos, a soap must have the following properties:

1. It must not irritate the skin.
2. It must leave no alkali in the hair.
3. It must not form lime soaps during the rinsing process.
4. It must be easily soluble in water and easily rinsed out of the hair and scalp by means of warm water.
5. It must have a good detergent effect in the presence of alkalies.

The alkali limits in a good soap should lie between 0.03 and 0.05%. It is also advantageous to add known substances which prevent animal fibres from being injured by alkali; these substances should not unfavorably affect the color and appearance of the shampoo mixture and should impart softness and luster to the hair.

It is important to prevent, as far as possible, the deposition of lime soaps on the hair. These make the hair seem dusty when dry and also impart an unpleasant odor, since they are rapidly oxidized in air. The use of a protective colloid which either emulsifies the lime soap or transforms it into a granular product instead of a sticky one seems to be useful.

Dentifrices

Tartar has the following average composition: calcium carbonate 10%, calcium phosphate 65%, magnesium carbonate 2.7%, iron oxide 0.3%, organic substances 15% and water 7%.

The mineral substances in tartar come from the mineral substances in the saliva in which they are held in suspension by little-known organic compounds. Under certain conditions these mineral ingredients are precipitated and cemented by means of organic matter present. It is probable that this process is promoted by temporary changes in the hydrogen ion concentration of the saliva.

In sulfo-oleates we have compounds of uniform high quality which can prevent the daily cementing of lime-magnesia compounds precipitated from the saliva and which, in addition, will very slowly remove tartar already formed. In no case must the tartar removing substance affect the teeth themselves, so that the use of organic and inorganic acids must be entirely avoided.

Turkey Red Oil

Oils containing hydroxyl groups or unsaturated fatty acids may be sulfonated. These sulfonated oils are generally poorer emulsifying agents than soaps but they stop or lessen alkaline hydrolysis and have the power of dissolving considerable quantities of lime and magnesia soaps. The best sulfonated oils contain about 6.5% of SO_3, or are about one-third sulfonated. Recently, more highly sulfonated products have been made available.

Turkey red oils do not have a uniform composition. They dissolve in water to form clear or opalescent solutions and have great wetting and penetrating power. The sulfohydroxy acids have similar properties and are used in various industries but they are not altogether safe physiologically and may cause skin eruptions.

Turkey red oils are enjoying increasing popularity, especially in valuable special products. They are chiefly used in soaps (shaving soap, improvement of lathering in toilet soaps, acid shampoos, etc.) The ricinolsulfonic acid is frequently used.

Essential oils when mixed with turkey red oils are dispersable in water (bath preparations). Sodium sulforicinoleate has special emulsifying power: 10 parts of water and 10 parts of sodium ricinoleate make a paste which becomes jelly-like with 4 parts of water. More water leads to a milky emulsion.

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ADVANCING THERAPY

Vitamin A and Stones

Despite the criticism which vitamin A received regarding its effectiveness in prevention of colds, this important vitamin has since bobbed up as effective in a more serious disorder—stones in the kidneys. No less than twenty-one cases of kidney stones were treated with vitamin A by Dr. C. C. Higgins, of the Department of Urology of the Cleveland Clinic, and in each case the stones were made to dissolve and disappear. This discovery was the result of experiments on rats in which fifty per cent of the rats developed kidney stones and eighty-eight per cent developed bladder stones within 260 days on a diet deficient in vitamin A. The stones in the rats disappeared when large amounts of vitamin A were given in the food.

McKesson's Phos-Cal

Phos-Cal, a natural, highly concentrated preparation of calcium and phosphorus derived from pasteurized milk, is announced by McKesson & Robbins. The product, which is prepared in cooperation with the Rutgers Committee on Milk Minerals, comes in both liquid and tablet form, and is indicated in mineral deficiency of pregnancy, in convalescence, tetany, malnutrition, and as an aid in prevention of caries in children.

BiSoDoL Tablets

BiSoDoL, that justly famous product, is now available in tablet form, being packaged in flat tins of 30 tablets.

Constipation Remedy

In a report on constipation, Dr. F. H. Redwill, in the January issue of "Clinical and Medical Surgery," gives the palm to a product called Taxol Tablets consisting of agar, bile salts, and an extract of intestinal glands. In forty-one cases of constipation observed over eight weeks, Dr. Redwill reports that results were from "very satisfactory" to "excellent," with only one case negative.

Histidine in Peptic Ulcer

A study has been made of the treatment of 52 cases of peptic ulcer by the use of histidine. The dose given was 5 mils of a 4% solution administered daily for three weeks by intramuscular injection, no local or general reactions being observed. In two cases 20 mils was given daily for three weeks without apparent ill effects. So far as was possible with ambulatory patients, histidine was made the sole treatment. Results indicate 58% of symptomatic cures with disappearance of abnormal X-ray findings, 19% of symptomatic cures with persistence of abnormal radiograms and 23% of failures. Subsequently, three patients relapsed while one of the apparent failures improved.

Orasthin

L. Alexander administered Orasthin during labor and in the after-birth period to those patients in whom it was necessary to avoid rise of blood-pressure because of eclampsie or hypertony. Doses of 0.5-0.8 cc. worked after 4 minutes without raising blood pressure more than 5 mm. The great advantage of Orasthin over the usual hypophysis preparations lies in its failure to raise blood pressure. W. Schmitt used the preparation to prevent loss of blood in the after-birth period. According to F. Schuhmacher, injection of 1.0 cc. directly after the birth of the child considerably shortened the after-birth period and reduced the loss of blood.

New Medicines Abroad

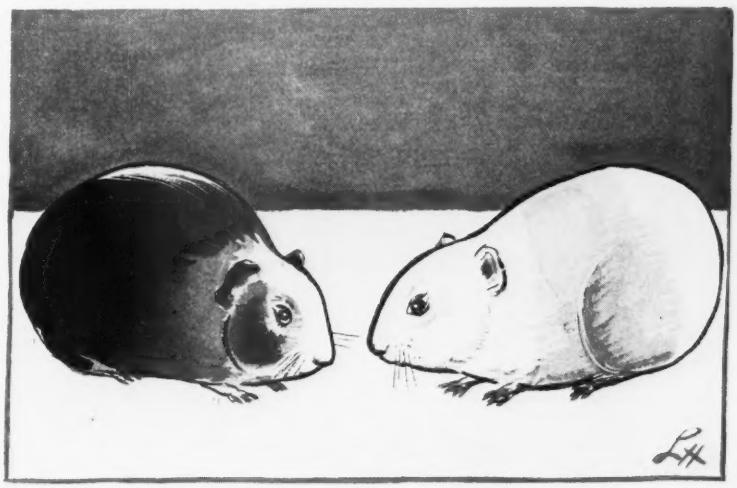
Androstin is the total testicular extract, physiologically standardized, containing all the active principles of the male genital glands. It is useful in the treatment of testicular insufficiency, impotence, infantilism, premature senility, obesity. Dose: Tablets, 3 to 8 a day. Ampoules, contents of one ampoule injected intramuscularly, using "A" and "B" alternately. Packings—tablets in bottles of 30. Ampoules of 1.7 cc. in boxes of 6 (3 ampoules "A"=water soluble active principles, and 3 ampoules "B"=lipo-soluble active principles).

Eutonon, hormonal cardiac, is suggested for use in all forms of chronic heart insufficiency. Dose—ampoules: 1.2 cc. intramuscularly once or twice daily. Liquid: 20-30 drops, three times daily. Packings—ampoules: 3 and 10 in a box; hospitals 50. Liquid: 20 cc.; hospitals, 200 cc. Pharmaceutical Products, Ltd., London.

Kephaldol, for the treatment of painful and febrile conditions. Each tablet contains acetphenetidin, 2.15 gr., sodium salicylate, 1.75 gr., quinine 0.45 gr., caffeine, 0.25 gr., salicylic acid, 0.15 gr., citric acid, 0.25 gr., amylum q.s. Two tablets to be taken three times daily. Packed in tubes of 12 and 36 tablets. Kephaldol Laboratories, Ltd., London.

Lodynic Products. Lodynic principle of low surface tension applied to treatment by ointments, jellies, antiseptics, etc. Used in the treatment of colds, gonorrhea, rheumatism, hemorrhoids. Packed in tubes. Research Products, Ltd., London.

Pentnucleotide is a mixture of sodium salts of pentose nucleotides. It is useful in the treatment of agranulocytic angina



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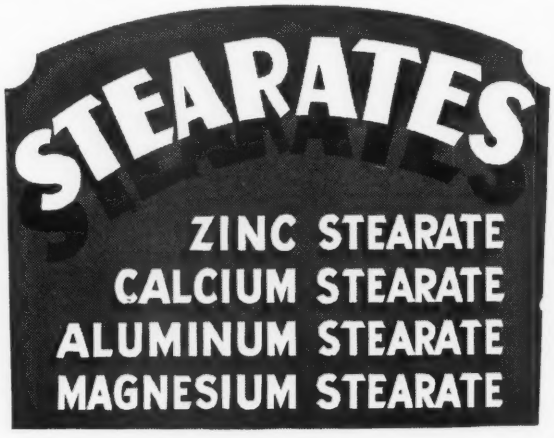

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and other infectious states, accompanied by an extreme lowering of the white blood cell count and polymorphonuclear cells. Packed in 10 cc. vials, 12 vials to a box. Menley and James, Ltd., London.

Pyrolactin is milk freed from fat and all bacteria. Pure or with added TAB vaccine, peptone or colloidal sulfur. Used in non-specific protein therapy. Packed in ampoules. Research Products, Ltd.

Sedin consists of potassium bromide 0.4 g., sodium bromide 0.4 g., ammonium bromide 0.2 g., salt 0.1 g.; with vegetable extract in soup tablets. Useful in neurasthenia, neurosis, neuralgia, headaches, insomnia, epilepsy, dysmenorrhea, etc. In tins of 10, 20, 40, 100 and 500 tablets. Hommel's Haemotogen and Drug Co., London.

Thelestrin is ovarian follicular hormone. It is a standardized preparation with a direct action on the endometrium. Administered hypodermically. Induces the hypertonic engorgement of the uterine mucosa preceding the menstrual flow. G. W. Carnich Co.

Oxygenated Pastilles "Sauter." These contain natr. perboric. 10 mg., acid. boric. 10 mg., menthol 2 mg., menthae essent., rosae synth. essent., procainum 0.5 mg., ephedrin. hydrochlorid, 2.5 mg., paraffin. liq., acac. gum.

Anusol. Each suppository contains bismuth. oxyiod. resorcinsulfon. 625 mg., zinc oxide 500 mg., Balsam Peru 125 mg., cacao 01., arach. 01., cera fl. Goedecke & Co.

Doryl. Each tablet contains 0.002 g. Doryl (carbaminoylcholine chloride) Packages contain 20 and 50 tablets. Ampoules contain 0.001 or 0.0005 g. of Doryl. E. Merck, Darmstadt.

Sucropin consists of belladonna extract 1 mg., codeine phosphate 1 mg., pini sylvestri ess. 6.25 mg., menthol 2.65 mg., fluid extract polygalae 2.65 mg., papaver. rhaeados fluid extract 13.8 mg., tolu balsam 4.46 mg., sodium benzoate 89.4 mg., thymi ess. vestigia, citri ess., anethol, glycyrrhiz. succus., glycerine and sugar. de Marchin.

Aspasmol. Tablets contain papaverine hydrochloride 15 mg., powdered belladonna 15 mg., phenobarbital 25 mg., solani amyl., talcum, stearic acid, gum acacia. Optima.

Asthmaphedrine. Tablets contain powdered belladonna 10 mg., ephedrine hydrochloride 25 mg., ethylmorphine hydrochloride 15 mg., potassium guaiacol-o-sulfonate 100 mg., sodium benzoate 50 mg., lactose 100 mg., stearic acid and gum acacia. Same manufacturer.

Detavit contains 800 standard biological units of vitamin A, 200 standard units of vitamin D, oil arachadis, liquid paraffin, gum acacia, tragacanth, anisetti liquor. essent., water to 1 cc. Bayer and Merck.

Migral contains caffeine 50 mg., sodium benzoate, phenazon 450 mg., calcium bromide, sodium bromide, anise syrup, water. F. Stache.

Di-iodo-tyrosine. Tablets contain 100 mg. diiodotyrosine, lactose 67.5 mg., sugar and white gelatine. Organum.

Di-Menformon. Ampoules contain dihydrofolliculin benzoate 50,000 units and olive oil to make 1 cc. Same manufacturer.

Ichthoplasma consists of bolus alba, glycerine, borax, bithiol, camphor, menthae essent., methyl salicylate, iodine., cajeput. ess.

Hepamult contains vituli hepatis extract. special 33 g., starch, vanillin, castaneae fuscus and sugar. Norgine.

Ferro-Hepamult contains vituli hepatis extract. special 33 g., ferrum reduct. 15g., ferrous sulfate 5 g., rubrum Italum, virid. atom., sugar. Same manufacturer.

Extractum Parathyroideae "Ifah" is parathyroid extract standardized against Collip-Hormone units. The preparation is used to strengthen the calcium effect, in substitution therapy, functional insufficiency of the parathyroid, to increase the blood calcium picture. It may also be used in disturbances of the secretion in the stomach and intestine, in joint rheumatism, during pregnancy and lactation, etc. Same manufacturer.

Eukasan is a palliative in the treatment of colds. It consists of hollow bonbons filled with liquid containing refined sugar, Japanese menthol, glucose and eucalyptol. Henze, Schokoladen-und Zuckerwaren Fabrik A.G., Eilenburg.

Ferrostabil is a stabilized ferrous chloride prepared according to a patented process that is sold in dragees corresponding to 0.05 g. Exhaustive pharmacological investigations have shown that ferrous chloride occupies a special position among iron compounds. It has special significance for the organism and is similar in its effect to natural iron compounds. Iron must first be reduced to the ferrous state before it can be effectively absorbed by the body and this occurs in the stomach. The preparation is recommended for various forms of blood insufficiency, especially chloroses and secondary anemia as well as for loss of blood (post-operative, after birth, heavy menstruation, etc.) Dose: 2 dragees after each meal. Schering-Kahlbaum A.G., Berlin.

Fissan-Sulfur Powder consists of prepared kieselguhr, slightly degraded milk albumin and "Fissankolloid," a basic fluorsilicate of the formula $Si(OH)_2F_2$. In this powder the sulfur is lightly attached to the Fissankolloid and is consequently very active. The preparation should be used wherever the use of sulfur powder is indicated. Deutschen Milchwerke A.G., Zwingenberg.

Glykhepar is a mixture of liver and glycocoll containing 17% of glycocoll along with sugar and other flavoring ingredients. It is indicated for all affections of the nervous system accompaniend by muscular atrophy. Dose: Three times daily 1 tablespoonful with water. Nordmark-Werke G.m.b.H., Hamburg.

Gynarcopan Birth Lozenges are mixtures to make childbirth somewhat easier. A package contains two lozenges of each strength. No. 1 lozenges: quinine hydrochloride 0.5 g., Narearicin (chemical combination of agaricic acid with a weakened morphine derivative) 0.015 g., ethylmorphine hydrochloride 0.02 g., papaverine 0.02 g., scopolamine hydrobromide 0.0003 g., diethylbarbituric acid 0.3 g., dimethylaminophenyldimethylpyrazolone-0.3 g., bismuth compound 0.1 g., coco oil. No. 2 lozenges: quinine hydrochloride 0.3 g., scopolamine hydrobromide 0.0005 g., dimethylaminophenyldimethylpyrasolone 0.15 g., ethylmorphine hydrochloride 0.05 g. Chem. pharm. Laboratorium Hermann Thiemann, Lunen.

Festal Dragees contain pancreas ferment preparation, hemicellulose preparation and gall ingredients. Packages of 20 and 50. I. G.

Entozon Salve contains dimethoxynitro-acridine dihydrochloride and Rivanol, talc, zinc oxide, lanolin and glycerine. Same manufacturer.

Calcibromat Ampoules. Ten cc. of the solution contains 1.24 g. of Ca-Br-Lactobionate. Chem. Fabr. Sandoz, Basel.

Spasmine Jolly. Extract from freshly stabilized Radix Valerianae, fluid extract Crataegus oxyacantha, curacao extract. Packages contain 90 g. Labor. Jolly, Paris.

Cortigen, in ampoules. One cc. of Cortigen contains the active principles from 15 g. of fresh Cortex suprarenale. Chem. Fabrik G. Richter, Budapest.

Euthagen Powder consist of 5% silver thiocellobiose in silicic acid powder. Packages of 12 and 50 g. Chem. Fabr. Grunau, Landshof & Meyer.

Arsen-Helpin-Ampoules contain lecithin, glycerine, electrolyte salt, paraminobenzoyldiethylaminoethanol hydrochloride, monomthyl disodium arsenate and distilled water. Same manufacturer.

Bactolax-Granulat consists of tragacanth, frangula extract, lactobacillus acidophilus. Packages contain 100, 250 or 500 g. Sanabo-Chinoin G.m.b.H.

Risin, a cold ointment, contains anesthesin, adrenalin, menthol, eucalyptol, boric acid, vaseline and lanolin. The preparation is recommended for the treatment and prevention of colds and also in nasal surgery.

Theacylon, a diuretic in heart and nerve ailments, is acetylsalicyloyl theobromine, formula $C_{16}H_{14}O_5N_4$. It is a white, crystalline powder, melting at 195° C., slightly soluble in water. Product is sold as the powder, as 0.5 g. tablets and as 0.25 g. intestinal capsules. E. Merck, Darmstadt.

READERS'

Inquiries must be addressed department on the letterhead of firms. Inquiries from private

VITAMIN CREAM

We wish to make a lubricating vitamin cream containing not less than 2000 D. M. A. units of D per ounce. What ingredients percentages, procedure and equipment are used. We are very much interested and will appreciate any information you have. You have helped us in the past and we hope you can again. Davenport.

The percentage to be used depends upon the strength of the vitamin concentrate employed, hence, the proportion can be determined by a little mathematics. No special equipment is needed but precautions should be taken against exposure to light and excessive heat. Make the cream in the usual way and stir in the vitamins concentrate. You can use carotin, halibut liver oil or cod liver oil concentrate, provided you can cover their odor.

EFFERVESCENT BROMIDES

We would like some suggestions as to the preparation of a bromidic effervescent salt. Are there any special conditions governing manufacture? Winnipeg.

You can make such a preparation as follows: potassium bromide 8 parts, sodium bromide 8 parts, ammonium bromide 8 parts, sodium bicarbonate 10 parts, citric acid 4 parts, tartaric acid 4¼ parts, sugar 1¾ parts. Moisten with 3 parts of absolute alcohol, granulate and dry to 40° C. This mixture can be compressed into tablets. You cannot make any effervescent salt without taking precautions against moisture. Most firms make and package this type of product in de-humidified rooms.

TOXICITY OF SULFATED ALCOHOLS

We would appreciate any information on the toxicity of the newer sulfated alcohols such as sodium lauryl, cetyl, oleyl and stearyl sulfonates. Can they be used in skin, oral and food preparations? Rochester.

So far as we know none of these chemicals is toxic. They have been used externally and in mouth preparations but we don't know anything about their reaction if taken internally in foods.

BUCKTHORN SYRUP

We are interested in gum karaya as a basis for a liquid laxative of buckthorn. How should the base be made up? St. Louis.

About one or one and a half per cent of the best grade of gum karaya mixed with a solution of alcohol, glycerin and water should do the trick. Or as an alternative you might mix the gum with simple syrup and add a sufficient quantity of buckthorn extract to the mucilage.

QUICK MELTING CREAM

Can a quick melting cleansing cream be labeled liquefying? What is the difference between anhydrous lanolin and absorption base derived from lanolin?

The answer to the first question is yes. There isn't any difference. Absorption bases are softer, less odorless than lanolin from which they are derived. Usually they contain the oxycholesterols of lanolin in a hydrocarbon vehicle.

PERFUMING SHAMPOO SOAPS

We are glad to hear again from our friend H. A. Rogers, Adelaide, S. Australia, relative to a method of perfuming shampoo liquids. Mr. Rogers says:—

"I perfume my shampoo after filtration with a soluble perfume made by mixing equal parts of the perfume oil with neutral sulphonated castor oil. The addition of ½ ounce of strong ammonia per ounce of sulphonated castor oil and perfume mixture will make it very much more soluble. This method saves a lot of the perfume that would otherwise be lost by exposure and filtration. If the perfume contains a lot of solids such as musk, gums or resins, it is suggested that the following mix be tried: pale oleic acid 2½ fl. ozs., perfume oil 5 fl. ozs., mix well and add the following solution: ½ fl. oz. strong ammonia in 2 fl. ozs. 90% alcohol. Shake well. The first recipe will mix bright and clear, but the second is milky. However, it will solubize any perfume and it will mix clear in a strong soap solution.

"If any of your readers have difficulty with vanishing cream rolling out after it has been applied, the following formula will overcome the trouble: Melt 8 ozs. stearic acid to 200° F. and stir in a solution of (98%) potassium hydroxide ½ oz., in 2 ozs. each of glycerin and (90%) alcohol. Stir the mix thoroughly which should be quite clear and transparent, rewarming if necessary. Then add from 32 to 40 fl. ozs. of water heated to 180° F. depending upon the desired fatty acid content."

Mr. Rogers adds that the bottle capping waxes described in this department last month work better after they have been melted three or four times.

K-IODIDE

Why is potassium iodide used in tincture of iodine? Chicago.

It helps to dissolve the iodine and prevents the precipitation of iodine when water is added to the mixture. It is claimed that it prevents the reduction of iodine to hydriodic acid.

GLYCERIN IN TINCTURES

We notice that glycerine is usually specified in making tinctures. Can you give us the reason for this? Philadelphia.

It is supposed to aid in dissolving drug constituents and to retard changes or precipitation.

SOLID MATTER IN HYPO TABLETS

We are planning to make a line of hypodermic tablets and we developed a base which has none of the objections of usual bases but we were informed that we cannot use any base containing talc. Is this true and if so why? Pittsburgh.

Yes. Solid matter should never be injected into the blood stream.

BLACK DISCOLORATION

We have just gone into the manufacture of hemorrhoidal ointments and we are in a great deal of trouble because most of the stock up job we shipped out has been returned to us because it turned black. This worries us very much and we would appreciate your suggestions. Philadelphia.

The customers must think we possess some sort of clairvoyant ability to give advice because they so often forget to enclose their formulas when trouble comes. In this case, since the material is for hemorrhoids and probably contains tannic acid, we should say, mathematically speaking: Tannic acid + iron = black reaction. So we suggest you check over your mixing and filling equipment. You probably will find some of the parts made of unprotected iron or steel.

QUESTIONS

individuals cannot be considered. This service is limited to the trade only.

EMULSIFYING AGENTS

We are very much interested in obtaining information on emulsifying agents for both types of emulsions. Hitherto our line has consisted entirely of relatively simple so utions and we are thinking of putting out an emulsified line of medicines of both water-in-oil and oil-in-water types. We'd like up-to-date information on the subject. Philadelphia.

Oil-in-water emulsions are much easier to make and hence very much more common than the reverse type. There are some chemists who go so far as to say it is not possible to make a liquid water-in-oil emulsion that will remain stable for any length of time. We wouldn't pass judgment on such an opinion because it seems to us that the difficulties currently encountered in making liquid water-in-oil emulsions are due to inexperience and insufficient knowledge of manipulation, a fact which may be inferred from the conversion of O/W emulsions into W/O under certain conditions. There are so many variables affecting the manufacture of stable W/O emulsions such as the adjustment of the gravities of incorporated materials, adjustment of temperatures, manufacturing routine, etc. that far be it from this department to say when the problem of making a stable W/O emulsion may become as easy as the reverse type. Emulsifying agents may be classified somewhat roughly as follows:

Gums: acacia, chondrus, tragacanth, karaya, quince seed, pectin.

Soluble soaps: sodium and potassium stearates and oleates, triethanolamine stearate and oleate, ammonium oleate and linoleate.

Insoluble soaps: the stearates of aluminum, zinc, magnesium.

Miscellaneous: sulfated castor oil, sulfonated oils in general, sodium lauryl sulfonate, triethanolamine, lanolin, absorption bases, glyceryl mono-stearate, casein, albumin, rosin, oxidized oils, ethylene glycol, etc.

These are the commoner emulsifying agents. There are very numerous trade-marked emulsifying agents mostly suitable for O/W emulsions. There are a number of patents governing the use of oxidized vegetable oils in the manufacture of W/O emulsions. The oleates of bivalent metals are useful in making W/O emulsions and the patent literature mentions the use of N-alkyl pyridines. The making of O/W emulsions requires but little care as they are quite easily made, but the manufacture of the reverse type in liquid form is very difficult. It is, however, easy to make semi-solid W/O emulsions.

AMPULE SEALING

We have started the manufacture of an intravenous solution which is dispensed in ampuls with which we have had considerable trouble on account of leakers. Is there any way to be certain that all the ampuls are absolutely tight before they are put up? Chicago.

The usual practice is to take the ampuls while they are still warm after coming out of the autoclave and immerse them in water dyed a bright red. The leakers will suck in some of the red solution and can thus be detected after the ampuls have been cooled and washed.

EXTRACTING DRUGS

For a good many years we have been making various kinds of proprietaries but we have never made any of our own extracts. We usually buy the concentrated extract and dilute it to suit our own purposes. In view of the fact, that we are planning to do our own extracting in the future, we would like your opinion as to the factors underlying the extraction of crude drugs and also whether or not we are obliged to follow U. S. P. rulings exactly. Pittsburgh.

There are three basic factors underlying the extraction of crude drugs:

Rate of penetration.

Rate of solution.

Rate of separation.

The first pertains to the speed with which the menstruum can penetrate into the cells of the drug. Obviously this depends upon the porosity of the drug, its particle size and the character of the cell wall. That is why the U. S. P. directs different meshes for different kinds of drug, leaves for instance being coarsely ground and woods fine. That is why the U. S. P. directs a varying maceration or soaking time. It is obvious that the rate of penetration is directly affected by the methods used.

The rate of solution means the speed with which an active principle will go into solution in a given menstruum. It is for this reason that the various type processes were adopted. The slower the rate the longer will the menstruum have to be in contact with the drug. Obviously this process depends upon the laws of dialysis and to a certain extent upon surface tension. When the menstruum has penetrated into the cell and the active principle has gone into solution, a difference in concentration between the interior and exterior solutions is created. These tend to equalize themselves in time by the passage of the more concentrated solutions through the capillaries of the drug cell or by osmosis through the cell wall itself. The greater the concentration of the exterior solution or solvent the slower will this reaction be. Obviously this reaction is affected by the speed with which less concentrated solvent is brought into contact with drug particles.

The rate of separation means the speed with which the percolate may be separated from the marc. This depends upon the porosity of the marc, the viscosity of the percolate and the means employed for effecting the separation. At the time when the percolate is drawn off there is within the apparatus, theoretically, a condition of perfect saturation and solution, which means that the saturated percolate not only surrounds and fills up the interstices between the drug particles but it also lies within the particles themselves. So the problem of separation involves obtaining, not only the exterior percolate, but also that which entrapped within the drug cells. It is for this reason that several washes are employed or else effective mechanical means of separation utilized. Obviously the effectiveness and speed of separation will depend upon the apparatus employed.

As to mechanical means of separation the U. S. P. specifically directs large volume makers to use their own judgment, provided the finished products conforms to U. S. P. requirements. These permissible variations refer to the apparatus and not to the materials or conditions. In other words where grain alcohol is required, no other may be used. Where heat is prohibited, no apparatus or means of extraction employing heat can be employed.

Correction:

In these columns it was stated last month that potassium arsenate dissolved dandruff. We apologize for this typographical error. The item should have read potassium arsenite.

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Representatives are wanted in a few territories . . . . . Inquiries are invited.

RAW MATERIAL MARKETS

Edited by Harry G. Kelbly

LIME OIL ADVANCES SHARPLY

Continuance of reversed trend likely

Lime photos courtesy "The Manufacturing Chemist"

Carting Limes on a Plantation in Dominica, British West Indies

This oil has advanced very sharply in the current spot market and continues to show considerable potential strength at the new and higher levels. Distilled oil is offered at a range of from $6.50 to $7.00 for quality material with the range for expressed material also higher at from $11.00 to $12.50. These prices are in sharp contrast to the price of $4.25 at which distilled oil could be obtained only a few months ago when expressed was offered at $9.00 per pound.

Various reports as to the reason for the reversal in trend for lime oil are being expressed in New York. Reports are current to the effect that at the low levels which prevailed several months back dealers in London had been quietly buying liberally of stocks in the West Indies with the result that the islands offer nothing at all to this market now. Virtually the only source of offerings of replacement goods came from London during the past few weeks which would lend credence to these reports of manipulation on the part of London interests. It is further stated that a combination of interests have gone so far as to be in the preliminary stages of the formation of a monopoly but this has not been confirmed.

A further strengthening factor is said to be the fact that considerable fruit is being consumed as such with a resulting shortage in material available for the production of oil.

To get a complete picture as to the possibilities involved for a continued strong market it is necessary to go back several years and review conditions in the British West Indies, the largest producers of lime oil.

The Leeward Islands is a British Colonial unit comprising most of the small islands extending from Puerto Rico to Martinique. This island group although having a total area of only 704 square miles is at present an outstanding world source of lime oil.

Dominica, the largest of the Leeward Island group, has for years been a leading factor in the lime and lime products trade. The area under lime tree cultivation in Dominica was estimated in 1929 at 18,000 acres. The fruit oil and juice industries associated with this agricultural pursuit are the principal activities of the WWW are the p r i n c i p a l activities of the population.

However, during postwar years many adverse climatic and cultural conditions affected lime production in Dominica. In 1922, a fungoid disease known as "withertip" began to attack the trees, and since proper protective measures were not employed, in a few years many of the trees in the upland interior districts were badly damaged and a number of plantations were abandoned. Hurricanes in 1926 and in 1928 caused material injury to the Dominica lime industry by loosening the roots of trees and shortly after a root fungus called "red root" made severe attacks upon lime tree groves. The worst hurricane for many years struck the island in the summer of 1930 and uprooted a considerable number of the trees not affected by fungus disease and inflicted damage to lime tree plantations estimated roughly at over $1,000,000.

Pelletier, Co-discoverer of Quinine

THERE is a tradition that the Indians of Peru were acquainted with the curative properties of Cinchona Bark, the story being that an Indian was cured of an ague after drinking water in which Cinchona trees had fallen, owing to an earthquake.

The Countess of Chinchon, who had been a famous beauty at the Court of Philip III, was seized with tertian fever while residing in Lima in the year 1638. The administration of Peruvian Bark cured the distinguished patient. The news of the cure was mainly responsible for the introduction of Peruvian Bark to Europe.

In 1820, Pelletier and Caventou isolated Quinine from the Bark.

Today practically all of the Bark is obtained from cultivated trees grown in Java.

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Brucine Sulphate	Opium Gum (*Gran. and Powd.*)
All Salts of Cinchona Alkaloids	Potassium Iodide (*Cryst. Gran. and Powd.*)
Codeine Alkaloid	Quinine Sulphate and other Quinine Salts
Codeine Phosphate	Strychnine Alkaloid
Codeine Sulphate	Strychnine Sulphate
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An attempt to return the Dominica industry to its former position of outstanding prominence has been made during the past five years. Experimental introduction and planting of new lime varieties which are reputed to be more resistant to fungus attack and hardier in the face of high winds has been carried on by both Government and private agencies on the island. These trees will come into bearing in from three to seven years.

These are conditions under which the industry has struggled during the last few years, and from which they have not as yet fully recovered.

The conditions enumerated above are said to have made it comparatively easy for manipulators to obtain control of at least a sufficient quantity of the production to exercise price influence. Some factors, however, feel that when production again reaches maximum, factors at the source will break away from their present attitude and offer more freely. The new crop period is from June-July and November-December. Until that time at least, present conditions indicate a continued firm market.

Native Limes of Montserrat, British West Indies (two-thirds natural size)

(Note that the tree flowers and fruits at the same time)

SPOT ADVANCE IN CITRUS OILS REFLECTS PRIMARY POSITION

Buyers show keen interest in situation

One of the features of an active essential oil market is the current price advances and strong undertones in citrus oils. Italian lemon oil has been put up to a basic range of from $1.25 to $1.45 per pound. Italian orange oil was also advanced drastically to a range of from $1.90 to $2.75 per pound. Both quotations are as to seller, quantity and quality.

Primary market cables were very firm at existing levels and foreign shippers had exceptional ideas. They reported an excellent consumption throughout Europe.

Several reasons were advanced here for the strong position taken by the Italian citrus oils one of which indicated that because of the prevalence of an epidemic of influenza in Italy, Spain and in fact Europe generally there has been an exceptional demand for fresh fruit. The Italian Government is also said to have put an embargo on the importation of a whole group of essential oils in order to promote the home use of the domestic oils. This has materially strengthened the Italian oils generally. This report is said to be authentic and has been confirmed in several sources.

The domestic citrus oils have already felt the influence of rising prices in the Italian market. Cailfornia orange has been advanced to the basis of $2.25 per pound, an advance of 25c. No change in California lemon has been noted as yet, the price remaining at the previous 60c per pound price, but it is almost a certainty that this market will go upward along with the general trend of prices as the differential between the domestic and imported articles is now entirely too wide.

With the generally larger consuming season for citrus oils just ahead the present conditions are causing a great deal of interest and it would appear that manufacturing consumers not already covered on their summer requirements should take special interest in these items.

United States Imports of Essential Oils From Spain

The quantity and value of essential oils declared for export from Seville, Spain, to the United States during 1934 showed a substantial increase for practically all of the oils concerned over the preceding year. The Seville area accounts for a large per cent of the total Spanish production.

	1933		*1934*	
Oil	*Pounds*	*Value*	*Pounds*	*Value*
Cade	4,598	$596	5,240	$903
Fennel	.....	.....	110	75
Lavender	.....	.....	770	271
Marjoram	661	319	.....	.....
Neroli	6	134	.....	.....
Orange	110	85	452	467
Origanum	15,069	11,474	24,213	21,488
Pennyroyal	4,533	3,490	5,338	4,356
Rosemary	52,103	16,365	75,676	26,293
Rue	176	190	110	152
Spike	36,577	23,292	55,875	52,016
Sweet orange	216	249	971	1,039
Thyme	13,252	7,641	7,747	6,505
Total	127,301	63,835	176,502	113,565

BALSAMS—Quotations were again lower during the past month for Peru balsam placing the current spot market on the basis of from $1.75 to $1.95 pe-pound. Sellers have become more rer served at these levels, however, following further detentions of importations after examination by the Department of Agriculture.

Production of balsam Peru in El Salvador during 1934 was estimated at 48 metric tons with a value of $70,000. Exports for the first 11 months of 1934 amounted to approximately 43 tons valued at $63,000. Of this quantity, the United States took 24 tons.

The Department of Commerce reports that the demand for Salvadoran balsam varies considerably and the price fluctuates greatly. The weight of shipments in 1934 was about one-eighth less than that of 1933, although the value was about twice as great. This is explained by the fact that whereas the price for the grade of balsam commonly sent from this area was slightly more than $0.75 (U. S. currency) a pound, c.i.f. New York, in January 1934, it increased to between $1.50 and $1.90 a pound in September. Recent price quotations are around $1.25 a pound.

Some sellers of Tolu balsam have goods in hand that were bought at much higher prices than now prevail for arrival goods. This has acted as a stabilizing influence at current levels of from 21c to 22c per pound.

There was no change in the situation as regards Copaiba. Business was hand to mouth for the most part but sellers were not disposed to accept bids so that the market was fairly well established at from 20c to 21c per pound.

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SALICYLIC ACID SODIUM SALICYLATE
METHYL SALICYLATE
MINOR SALICYLATES

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Creosote Carbonate	Benzoic Acid	Para Formaldehyde
Guaiacol	Benzaldehyde	Hexamethylenetetramine
Guaiacol Carbonate	Benzyl Chloride	Glycerophosphates
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BULGARIAN ROSE OIL

Production of rose oil in Bulgaria during 1934 was about 25 per cent less than normal, and 50 per cent less than the record crop of 1933. The situation may be summarized thus:

	1932	*1933*	*1934*
Rose flowers kg.	7,746,000	12,639,000	5,975,000
Rose oil kg. "	1,891	3,450	1,743
Are cult. hectares	7,103	7,298	7,050

As already reported, the Agricultural and Cooperative Bank of Bulgaria has the virtual monopoly of rose distillation and sale. About 1,660 kilograms were distilled under the control of the Agricultural and Cooperative Bank in 1934 by way of the cooperatives.

The bank's stocks are now estimated at about 5,000 kilograms of rose oil, resulting mainly from the large 1933 crop. From 1,500 to 2,000 kilograms were formerly held in the hands of producers and merchants. The tendency to decrease the acreage, and the fact that rose oil has been put on the list of export commodities to be used in barter transactions against imports of the so-called luxury commodities such as motor cars, and radio sets, may gradually reduce this considerable surplus.

The average price of rose oil during the last weeks of 1934 was 26,000 leva per kilogram, as compared with 28,000 leva a year ago.

Many foreign purchasers prefer to deal only with the Agricultural and Cooperative Bank of Bulgaria, although its prices are on cash terms, or at least to insist on shipment by the bank with its seal on the containers.

Exports of rose oil during the first three quarters of 1934 amounted to 911 kilograms valued at 26,919,000 leva, as compared with 1,129 kilograms valued at 43,604,000 leva during the like period of 1933. It was estimated that by the end of 1934 an additional 400 kilograms would have been exported, bringing the total exports in 1934 to about 1,400 kilograms, valued at 38,000,000 to 40,000,000 leva. Exports of rose oil in 1933 amounted to 1,413 kilograms valued at 52,000,000 leva, and in 1932 to 919 kilograms valued at 38,000,000 leva. During 1934 France was the destination of about 40 per cent of the exports, Germany 16 per cent, Great Britain 11 per cent, and the United States and Switzerland about 9 per cent each.

It is further advised from Sofia that since December 1, 1934 the sale of rose oil was effected directly by the Agricultural and Cooperative Bank, a State institution. Prior to that time the bank had controlled production and distillation, and had placed its seal on containers, but the actual merchandising was left to individual initiative.

Gathering Roses at Karlouo

PRICE WAR IN VANILLIN RESULTS IN LOWEST PRICES FOR LONG TIME

VANILLIN—The long standing competitive situation between producers of vanillin from eugenol (clove oil) and vanillin from guaiacol (coal tar) again flared into the open with a series of price declines during the past month which has placed this item at the new low level of from $3.00 to $3.50 per pound as to quantity.

Production costs from guaiacol have not materially decreased. Guaiacol is made from coal tar which is a by-product from coke obtained principally from blast furnaces. As steel plants are operating at reduced capacity this naturally keeps up the price of various coal tar derivatives.

On the other hand production costs of vanillin from eugenol have declined and, strange as it may seem, it was through the action of one of the leading producers of the synthetic material that this was brought about, thereby enabling competitive factors to institute the series of price cuts which recently featured this material. One of the leading producers of vanillin, primarily interested in the synthetic material, has brought about the lower clove prices by relinquishing their large buying operations in cloves. This buying of cloves had previously acted as a stabilizing influence and kept prices high. They had formerly carried on their clove buying so as to justify their position on the synthetic material, and it was mainly for this reason that they continued to make the clove oil vanillin in addition to the synthetic.

There previously also existed a sort of gentlemen's agreement between the two groups of manufacturers which placed the guaiacol vanillin 25c per pound below the eugenol and for a long time this differential in price was more or less adhered to. The current price war has, it is said, eliminated this differential with both the clove oil and synthetic material now being offered at identical prices.

On an even price level the eugenol material has a psychological sales advantage as most buyers, it is reported, would prefer vanillin from the natural raw material even though it is practically impossible to tell the two grades apart. Just how far both groups of manufacturers are willing to go in this war it is impossible to say but both principals are very strong and can go the limit if necessary.

LEMONGRASS OIL—Lower on spot at from 90c to $1.20 per pound as to seller and quantity. Exports of oil from India for the 6 months, April 1 to September 30, 1934, amounted to 38,146 gallons valued at 579,551 rupees, as against 22,964 gallons valued at 274,424 rupees and 18,428 gallons valued at 176,282 rupees for equivalent periods of 1933 and 1932.

LAVENDER—High quality material continued exceptionally firm and the upward tendency is most likely to continue as heretofore pointed out. Medium to low test oil was steady. All qualities were affected by the fact that the replacement cost of all grades was strongly held abroad where stocks have decreased substantially. Demand in the local market is rather narrow. This has tended to prevent any sharp advance in prices here though present conditions abroad fully warrant a further upward movement in spot prices.

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BOURBON VANILLA BEANS DOWN AGAIN

Dealers express satisfaction at trend

The reversal in price trend in Bourbon beans which set in just prior to the turn of the year has continued into the current spot market. The most recent decline amounted to 30c per pound placing the range at from $2.20 to $2.60 as to quantity and quality. It is also noted that the range as to quality has narrowed considerable, their now being only a spread of 40c between general run material and the best prime beans. The previous price range was from $2.50 to $3.25 as to quality.

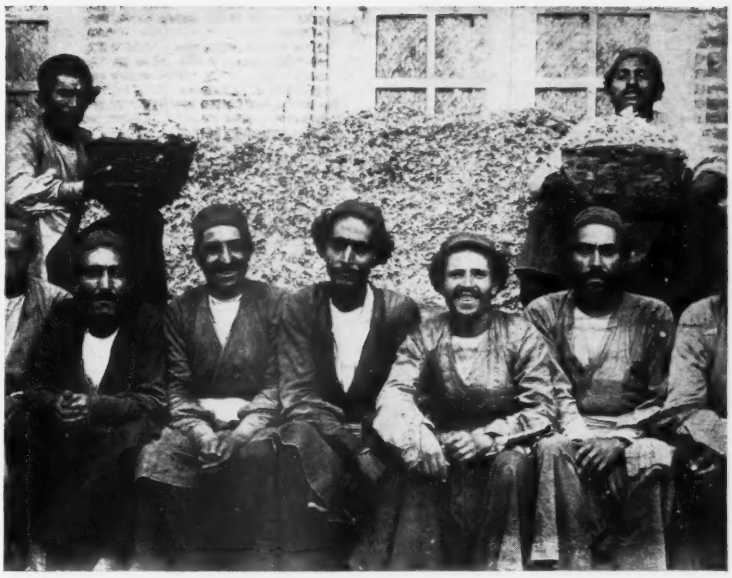
The poor consuming request at the high prices which prevailed during the closing months of 1934 was probably the basic reason for the change in attitude on the part of both primary market shippers and dealers. It was also pointed out that Germany, which annually consumed about 150 tons of beans has, because of economic conditions and exchange difficulties, practically ceased buying with the result that this amount of beans must be disposed of elsewhere. The loss of this market, for the time being at least, is an important factor when it is considered that the total world consumption of Bourbon beans during normal times is somewhere between 500 and 600 tons annually.

Statistically Bourbon beans are in the same position that prevailed when the price was well above $3.00. Several years will probably be necessary to fully correct the conditions which resulted from the drastically low prevailing prices prior to the latter part of 1934.

There seems, however, a well defined sentiment in favor of the present trend of the market. Desire for volume business based on comparatively low prices to the consumer was noted in and favored against a smaller total volume of sales made at higher prices recently prevailing.

A recent development in this situation which makes it particularly difficult to predict what the future trend will be is the price war which has resulted in the drastic reduction in vanillin quotations. Should this continue further, and there is some likelihood that it will, there is no saying what effect it will eventually have on the market for vanilla beans.

There has been no open price changes for Mexican beans but new business is practically nil. It is said that the undertone of the market has been weakened by the continued declines in Bourbons.



Gum photos in this issue courtesy Orbis Products Corp.

Jewish Merchants Selling Gum

PEPPERMINT OIL—Although prices in the country were steady the spot market was characterized by a further reaction in values. This has been the trend for many months now and although in no cases has the declines been drastic the consistently easier market has placed prices here on the basis of from $2.85 to $3.25 per pound for natural oil as to seller and quantity. Redistilled oil also ranged lower on spot at from $3.10 to $3.45 per pound. It is said that most dealers in New York find themselves supplied with high priced oil which was purchased during the period last Fall when it appeared as though there would be a decided scarcity in production due to the serious drought conditions that prevailed throughout the Midwest. Production, while below normal, was far better than early reports indicated primarily because of the increase in planted area on the Pacific Coast. There has, therefore, been an ample supply of oil available to meet the consuming requirements which have also been less both here and abroad. Cheap dementholized peppermint oil from Japan has also, to some extent, affected the export volume of American peppermint.

There is, however, a strengthening influence in the market at present levels and that is, as stated above, the fact that dealers here paid high prices for replacement stocks which will eventually result in a check to further recessions.

CARNAUBA—Number 1 wax was up to the basis of from 35½c to 36½c per pound. Practically no material was available for shipment from Brazil.

GUM ARABIC—Reports continue to come from the primary market indicating that deliveries of gum to the shipping ports was decreasing because of poor weather conditions. The trees will not produce gum if rainy weather conditions prevail as the gum is an exudation to protect the tree against the terrific heat of the Sudan. Importers here, however, point out that collection of the crop will continue into the Summer months and hence it is too early to know whether or not the present position at the source will be maintained.

On spot there was no open change in quotations but replacement cables indicate that prices at the source were higher.

Exports of gum arabic from the Sudan during the first 9 months of 1934 increased to 17,360 tons compared with 12,858 tons in the corresponding period of 1933.

Sudan gum was exported to 45 different countries during the first 9 months of 1934, but the bulk went to the United Kingdom with 4,000 tons, France with 2,886 tons, United States with 2,445 tons, Germany with 1,810 tons, Belgium with 1,370 tons, and Italy with 1,074 tons.

CASSIA OIL—Redistilled oil showed a further sharp advance to the basis of from $1.40 to $1.50 per pound. This was in line with the increased cost to replace the natural oil and the higher cost of redistillation as pointed out to manufacturing consumers in a prediction of the likely trend in the feature story which appeared in our issue of December 1934.

CEDARLEAF OIL—Competition brought shading of spot quotations. Oil in drums went down to 56c per pound with the range to 65c as to quantity and seller. Trading was small.

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HALIBUT OIL—The spirited bidding for the 1935 season's halibut livers has caused the prospective buying price to leap from last year's 21c per pound to 71c.

At this new quotation the value of a gallon of halibut liver oil would be about $47.50. Last year the output of halibut livers from the Alaskan catch was approximately 800,000 pounds. The contest to secure the large proportion of the crop is among five large pharmaceutical houses of Eastern cities.

Alaska halibut fishermen stand to earn huge sums this season from livers alone in addition to good prices for halibut.

COD LIVER OIL—Trial fishing at Bergen, Norway, has gotten under way and it was said that the yield from cod livers was about 50 per cent. The market there was steady and in New York demand has fully supported the market range of prices from $25.00 to $27.00 per barrel.

Unrevised statistics of exports from Newfoundland indicate that from August 1 to December 29, 1934, 171,434 imperial gallons of cod liver oil were shipped from Newfoundland as compared with 152,103 gallons for the corresponding period in 1933.

IODINE—According to the latest figures submitted to the California State Department of Mines, production of crude iodine is now 1,000 pounds a day from the three plants in that State, all of which are located in the Long Beach oil field. It is also reported that it is the belief of producers that it is entirely possible for this country to produce sufficient crude iodine to take care of the requirements of domestic manufacturers and in view of this fact they are asking the Federal government to impose an import duty on crude iodine with a view of equalizing the competition offered by Chilean and Japanese producers.

Iodine imports into the United States totaled 1,471,207 pounds valued at $2,118,676, as compared with 1,411,687 pounds valued at $2,936,489 for 1933. All the 1934 receipts originated in Chile, except for 2,100 pounds ($3,018) credited to Japan. It was reported that the recent reductions of the price of Chilean iodine in Asiatic markets has placed Japanese iodine in a non-competitive position.

The Corporation de Ventas de Salitre y Yodo de Chile, in its report of December 24, 1934, stated "The policy followed by the Corporation for sales of iodine, has been to establish free sales and competitive prices in all markets. With this end in view the special contracts which existed have been terminated, only those which did not impede the application of these principles being maintained."

Girls Sorting Gum Tragacanth

MENTHOL—The spot market was again lower at from $3.15 to $3.25 per pound as to quantity. This was in spite of the fact that the primary market continued comparatively firm as heretofore.

Between 400 and 500 cases of menthol were received in New York during the week of the 11th and in view of the narrow buying movement dealers seem more anxious to sell.

Menthol available in Japan as of January 1, 1935 is said to amount to 500,000 kin from which 20 per cent will be held over until the next crop. Japanese interests in pointing out the good statistical position report that exports for the first 6 months of 1934 amounted to 750,000 kin. This, as is well known, was caused by abnormal buying conditions particularly in the New York market during that period. Some 450,000 kin were exported during the first six months of the previous year and this is a more normal figure. Based on these export figures the Japanese characterize their market as statistically strong with 500,000 kin available all told and the new crop some six months away.

ALCOHOL—Reports suggest that distillers would approach the season of reduced sales volume in a condition favorable to the retention of a firm price structure. It is doubted that surplus stocks would become a burden on the market during the summer months as has often happened in the past.

The decision by the Agricultural Adjustment Administration not to import 125,000,000 gallons of molasses for feed purposes may result in there being just that much more material available for production of alcohol. This is because the situation regarding feed in the drought areas has improved greatly.

CAMPHOR SYNTHETIC—Stimulated by renewed sharp price cuts, Germany's exports of synthetic camphor gained strikingly in 1934 rising to a total of 1,707 metric tons valued at 2,827,000 marks in the first ten months, from 1,094 tons 2,411,000 marks in the same period of 1933.

The gains this year reversed the downward trend in German synthetic camphor exports in progress since 1929, exports dropping steadily from 3,049 tons (10,714,000 marks) in that year to 1,352 tons (3,749,000 marks) in 1932. In 1933 volume of exports recovered slightly, but further decreased in value. It would appear that within two to three years German synthetic camphor prices have been reduced around 50 per cent. For the first 10 months of 1934 the United States imported 422 metric tons as compared to 232 metric tons in the same period of 1933.

CAMPHOR NATURAL—Imports into the United States in 1934 were invoiced at $1,474,160, compared with $1,117,386 in the preceding year.

CALOMEL—Prices reduced under competition to basis of $1.08 per pound.

PHENOLPHTHALEIN—The excellent demand that has kept this market active for the past few months has also been productive of higher prices during the current trading period. The advance amounted to 10c per pound, placing the new schedule for U. S. P. at from 62c to 70c per pound as to quantity. Yellow was offered at 57c.

SANDALWOOD OIL—Exports of sandalwood oil from India for the 6 months period April 1 to September 30, 1934, amounted to 33,924 pounds valued at 374,758 rupees. Exports for a like period of 1932 and of 1933 amounted to only 13,332 pounds valued at 201,930 rupees and 20,490 pounds valued at 263,890 rupees respectively.

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PYRETHRUM FLOWERS—More liberal supplies, due to the fact that production from the last crop was somewhat more plentiful than at first had been apparent, resulted in a lowering of quotations on spot. Powdered Dalmation flowers were offered at a range of from 23c to 25c per pound in barrels. Japanese flowers sold at from 27c to 32c per pound.

During 1934 there was a gain over the previous year of 1 per cent in quantity and 35 per cent in value of pyrethrum imports into the United States. Japanese participation rose from 90 per cent to 95 per cent of the total. Brazil, a new producer, furnished a small quantity.

Sources of imports during the past 2 years are shown below:

	1933	
	Pounds	*Dollars*
Japan	9,066,040	1,373,450
Yugoslavia	838,256	94,372
Italy	446,197	52,072
United Kingdom	.....	.....
Russia	84,066	3,855
Brazil	.....	.....
Total	10,434,559	1,523,749

	1934	
	Pounds	*Dollars*
Japan	10,093,612	1,985,603
Yugoslavia	298,684	47,596
Italy	79,933	13,288
United Kingdom	42,369	6,340
Russia	30,395	1,330
Brazil	4,480	1,086
Total	10,549,473	2,055,243

The Chamber of Commerce of Split estimates production of Yugoslavia pyrethrum flowers for 1932 at 529 tons, 1933 550 tons and 1934 688 tons.

In some sections the quality of the 1934 crop was better than that of 1933, as for example, in the districts of Split, Supetar and Makarska. Improved practices have led to better prices, quotations for the districts mentioned having advanced to 31c to 38c a kilo.

At the end of November 1934, stocks of unsold pyrethrum of the 1933 and earlier crops totaled 20,800 kilos, while unsold stocks of the 1934 season were estimated at 154,400 kilos.

BOIS DE ROSE—According to the Department of Commerce there were, in 1935, only eight firms in the State of Amazonas (Brazil) distilling the essence of pau rosa (bois de rose). Up until 1931 the production of bois de rose had increased rapidly and prices dropped to an extremely low level, with the result that operation became unprofitable. The Government of the State of Amazonas therefore decided to control production, and a combine of producers was formed to limit the total annual production to 80 tons, equal to approximately 25 per cent of the capacity of the existing plants.

Although a few local firms are occasionally permitted to export rosewood oil from Manaos, it is handled almost exclusively by the Consorcio dos Extractores de Essencias Vegetais (the name of the combine). The oil is exported in drums containing about 180 kilograms net.

Gum Tragacanth Merchants in Persia

BERGAMOT OIL—A very firm market prevailed on spot. The price range was from $1.45 to $1.70 per pound as to quality and quantity. The foreign market had been noted for improvement in the past fortnight and local sellers have become somewhat reserved in accepting bids or shading prices. The reversal in the trend of this item is rather difficult to explain in view of the small current spot demand and can be answered only by the shipment position which continues to show strength.

Trade Commissioner Elizabeth Humes, Rome, reports that for many generations the germicidal qualities of bergamot oil have been empirically known to the peasants of southern Italy. Owing to the abundance of bergamot oil in Italy in excess of demand, an Italian firm has recently developed a high-class disinfectant from bergamot oil which will be known as "Sabeol." The natural bergamot is purified and concentrated, and the resulting product is obtained in various strengths and colors ranging from a clear straw yellow to a milky white. "Sabeol" retains the characteristic perfume of bergamot and is, it is claimed, highly disinfectant, non-irritant, and gives an alkaline reaction. According to the producers, surgical experiments carried out with the new product in several Italian hospitals have shown it effective in both aseptic and septic surgery. It is even said that it is also anesthetic to a considerable degree and that it has also given satisfaction when used as a disinfecting liquid soap. The producers claim that it can be prepared considerably cheaper than tincture of iodine and other currently used disinfectants.

THYMOL IODIDE—Competitive price cuts were noted with the new schedule at from $3.25 to $3.30 per pound. Thymol remained unchanged at from $1.70 to $1.80 per pound as to quantity and seemed fairly steady thereat.

CREAM OF TARTAR—Reduced ½c per pound with powder or granular material in 5 barrels or over at 16¾c per pound and less than 5 barrels 17c per pound. Crystal material was ½c per pound above these figures. Prices quoted are f.o.b. New York for prompt shipment only—no contracts being entered. This movement indicated the highly competitive character of the market which had prevailed over the past several months.

SILVER NITRATE AND SILVER SALTS—Manufacturers of these items have recently sent out bulletins reading as follows: "Under Treasury Department Release dated February 16, 1934, the Secretary of the Treasury, with the approval of the President, has amended the Silver Regulations of August 17, 1934. In view of this revised regulation, all silver nitrate or silver salts obtained since August 9, 1934, are exempt, and it is not necessary to file reports pursuant to such regulations with respect to the acquisition or disposition of silver salts. Furthermore, this amendment exempts you from making delivery of any quantity of silver to the United States Mint as representing any silver salts you may have had in your possession on August 9, 1934, or have since acquired."

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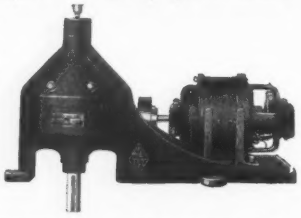

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Prices

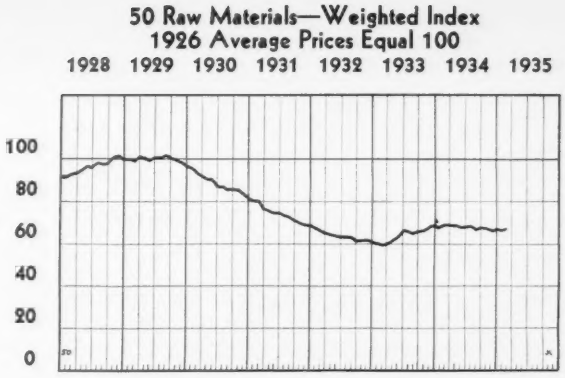
In spite of a decline in its most important component, the medicinal chemicals index, the price index of 50 commodities increased in March 0.4 over the 67.0 in the previous month.

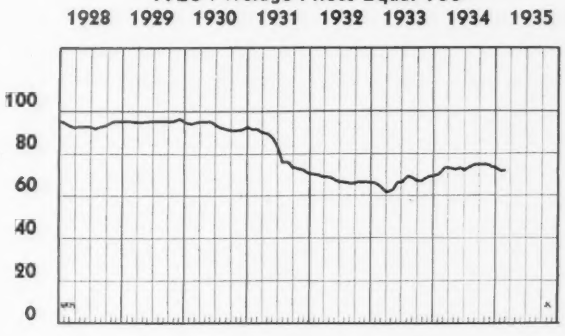
The medicinal chemical price index declined from 75.1 in February to 74.4 for March. The change was due to lower prices for three items. Cod liver oil dropped from $26.00 a barrel to $25.00; cream of tartar dropped one-half cent, falling to 17 cents; menthol lost 5 cents and was quoted at $3.20.

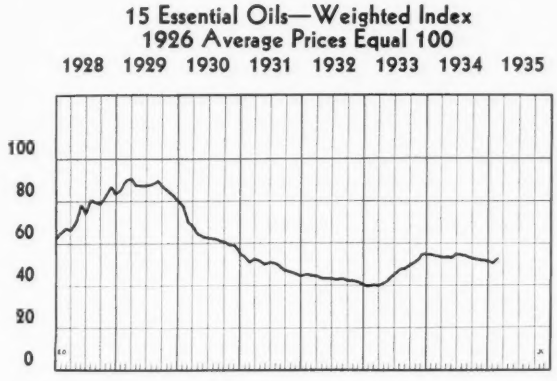
Two changes in botanical prices resulted in a net increase for the index from 67.9 in February to 68.7 in March. Although digitalis was reduced to 29 cents, aloes increased 2 cents to 18 cents.

Essential oils were active, net changes resulting in a rise in the index from 51.1 in February to 53.1 in March. This change is the consequence of three declines and four increases in components of the index. Anise rose from 42 cents to 47 cents; cassia increased 15 cents to $1.40; lemon oil jumped to $1.25; lime increased $2.00 to $11.00. Citronella dropped to 33 cents, lowest at least since 1925; geranium lost 25 cents and was quoted at $5.25; peppermint dropped 5 cents to $2.85.

The cosmetic raw materials index increased from 71.3 (corr.) in February to 72.0 in March. Balsam Copaiba rose from 19 cents to 20 cents; balsam Peru declined 5 cents to $1.75; candelilla wax increased from 10 cents to 11½ cents; Japan wax returned to its January quotation of 6¾ cents; menthol declined from $3.25 to $3.20; stearic acid continued its recent trend and increased to 11¾ cents, highest since July 1931.







TONKA BEANS—Increased supplies and competition caused mainly by lack of much of a consuming outlet was prevalent on spot and quotations dropped again to the basis of from $2.00 to $2.25 per pound for Angosturas. The tendency was still downward as stocks in dealers hands were substantial.

ARNICA FLOWERS—Up 1c per pound to the basis of from 18c to 20c. The market was very firm in all respects in view of what must be paid for replacements in Europe.

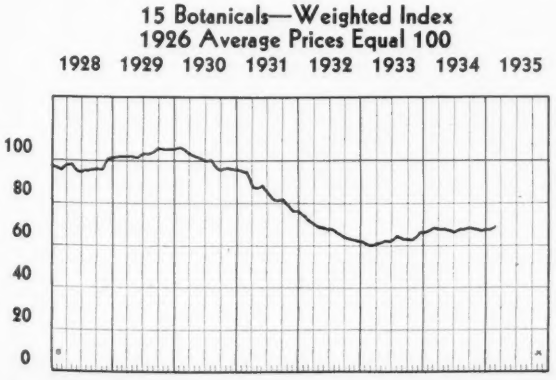
HENBANE LEAVES—Slightly lower at from 29c to 30c per pound. Goods have become available at the source at fairly attractive prices and the market here lost all its recent outward appearance of strength.

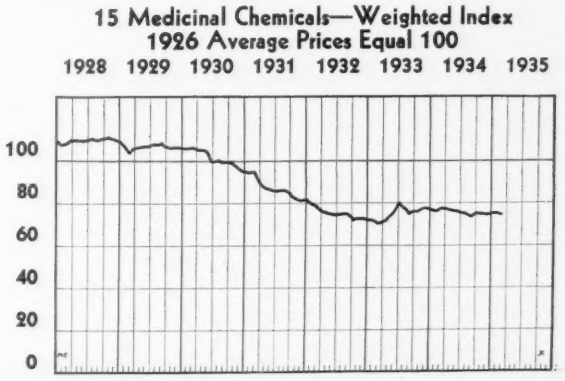
LYCOPODIUM—Local quotations were again advanced setting the market at from 34c to 35c per pound.

IRISH MOSS—Bleached material of the best quality suitable for pharmaceutical use was again advanced on spot, the range now being from 24c to 26c per pound—the highest ever to be reached by this item. The supply was very small here and cannot be replaced for some time. Demand for Iceland moss was very small but the lack of normal stocks was sufficient reason for extending further the upward tendency. The market was from 15c to 16c per pound.

MINERAL OIL—Importers of Russian oil reported as having done rather good business since prices were returned to a competitive level with the domestic oil. Prices for both domestic and foreign oils were held in a steady position.

CANDELILLA WAX—Advanced fractionally to the basis of from 11½c to 12c per pound. This was in keeping with the firmness for replacement.





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